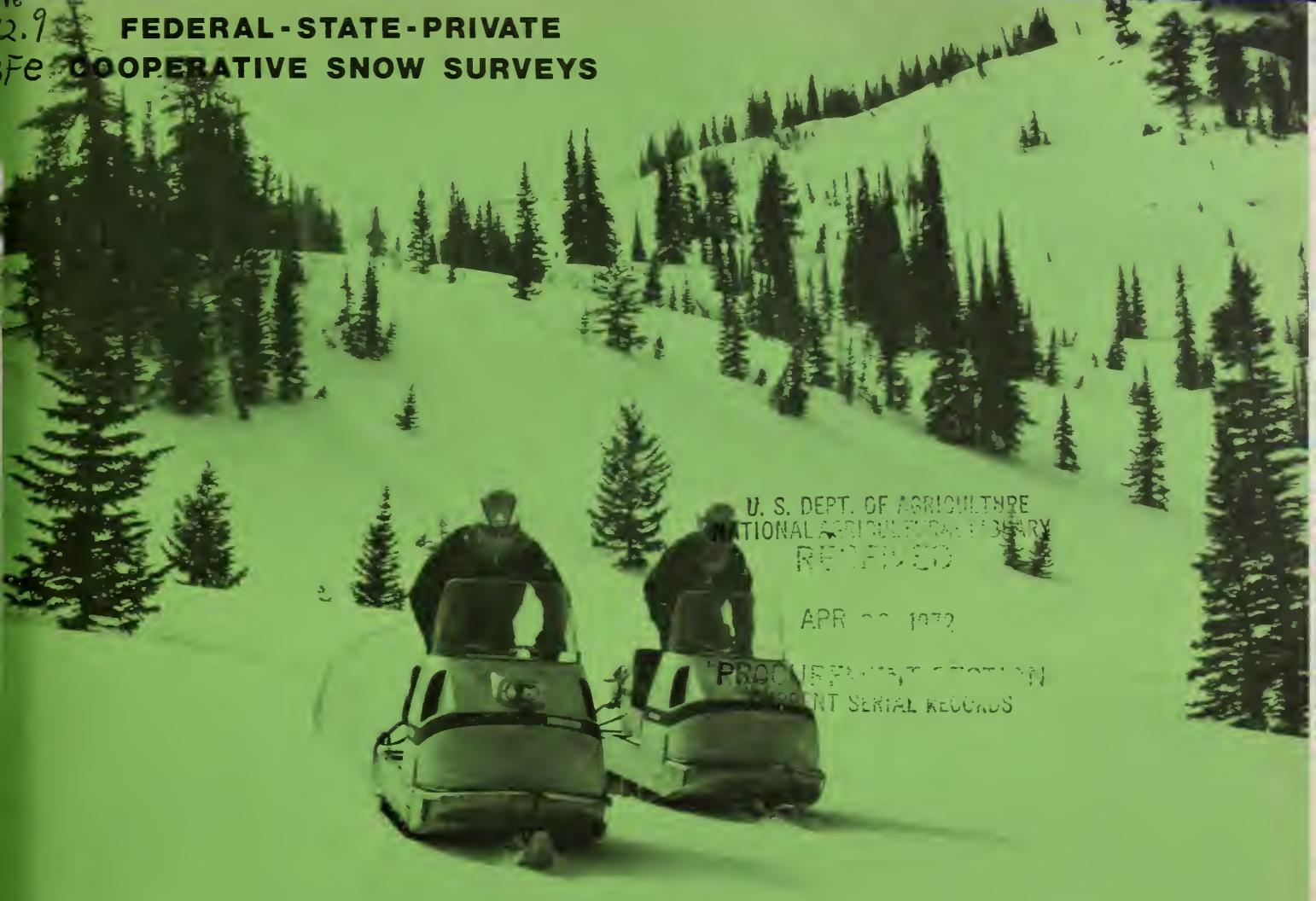


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2.9 FEDERAL - STATE - PRIVATE
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WATER SUPPLY OUTLOOK FOR WASHINGTON

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

Data included in this report were obtained by the agencies named above in cooperation with the U.S. Forest Service, U.S. Geological Survey, National Park Service, and other Federal, State and Private organizations.

AS OF
APR. 1, 1972

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO NUMBER ORC 221-3

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR WASHINGTON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

KENNETH E. GRANT
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

Released by

ORLO W. KRAUTER
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

In Cooperation with

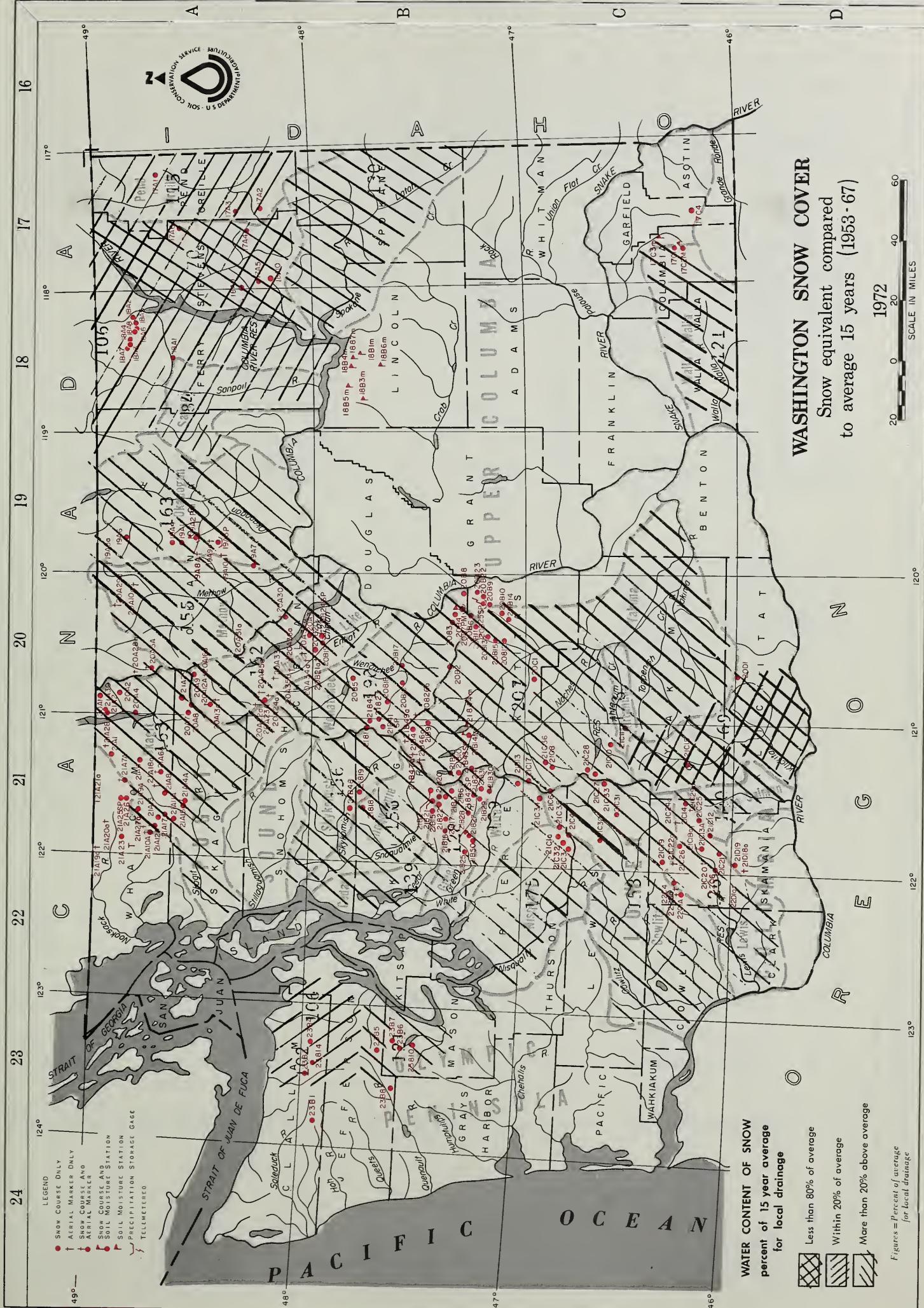
JOHN A. BIGGS

DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Report prepared by

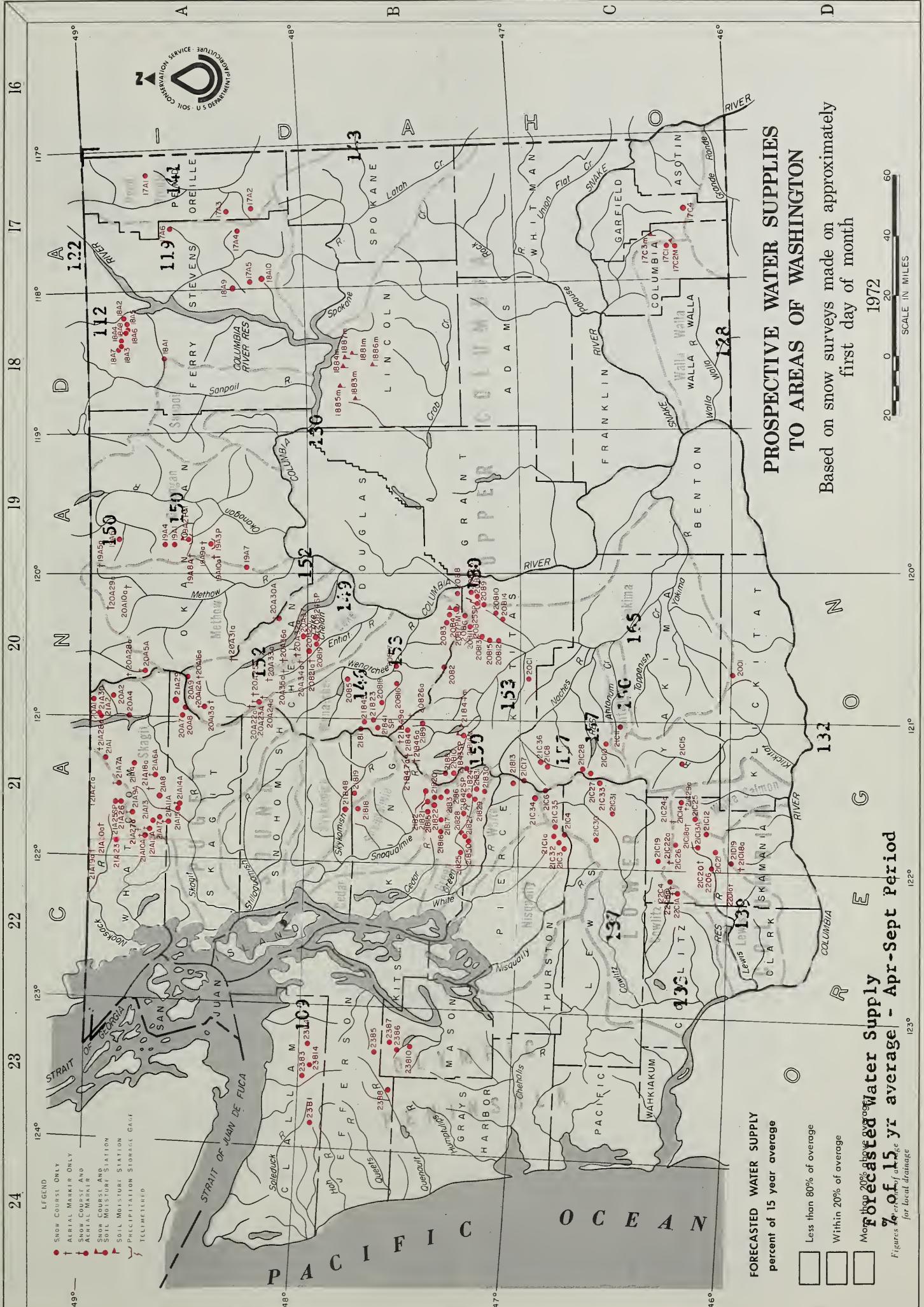
ROBERT T. DAVIS, Snow Survey Supervisor

SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201



INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STATIONS

NUMBER SEC. TWP. RANGE ELEV.					NUMBER SEC. TWP. RANGE ELEV.					NUMBER SEC. TWP. RANGE ELEV.																		
NAME					NAME					NAME					NAME													
UPPER COLUMBIA DRAINAGE																												
Pend Oreille River	Cold Creek	Colockum Creek	Colockum Creek Upper	20B22 11	20N 20E	5300	Divide Meadow	21C29a 21	9N 10E	5600	Beaver Creek Trail	21A4 /	35	39N 12E	2200													
Boyer Mountain	Colockum Creek Lower	Colockum Creek	Colockum Creek Lower	20B23 1	20N 20E	4300	Grand Pine Shelter	21C22 2B	9N 9E	3500	Beaver Pass	21A1 9	39N 12E	36B0														
Bunchgrass Meadow	Squillchuck Creek	Squillchuck Creek	Beehive Springs	20B3 12	21N 19E	4400	Marble Mountain	21C26 B	9N 9E	3800	Brown Top	21A2Ba 26	40N 12E	6000														
Winchester Creek	Scout-A-Vista	Scout-A-Vista	Scout-A-Vista	20B4 1B	21N 20E	3400	Marble Mountain	22C5a 24	BN 5E	3200	Devils Park	20A4 34	3BN 16E	5900														
Kettle River	Stemilt Creek	Stemilt Creek	Jump-Off	20B6 34	21N 20E	4450	New Muddy River	22C6 36	BN 6E	2000	Freezeout Creek Trail	20A1 14	40N 14E	3500														
Boulder Road	Stenilt Slide	Stenilt Slide	Stenilt Slide	20B6 30	21N 20E	5000	Oldman Pass	21D19 22	BN 7E	3100	Granite Creek	20A2 /	40N 16E	5000														
Butte Creek	Upper Wheeler	Upper Wheeler	Upper Wheeler	20B7PM 30	21N 20E	4400	Plains of Abraham	22C1a 35	9N 5E	4400	Smith Creek Road	21A29 25	36N 16E	3500														
Cabin Creek	Spencer Meadow	Spencer Meadow	Spencer Meadow	21C1 16	7N 7E	3400	Surprise Lakes	21C20a 16	BN 7N	2100	Meadows Cabins	21A2 19	40N 14E	1900														
Goat Creek	Table Mountain	Table Mountain	Table Mountain	21C24a 20	9N 9E	4250	New Hozonene Lake	21C13a 14	7N 7E	2800	Thunder Basin	21A30 /	40N 14E	2800														
Snow Caps Creek	Timbered Peak	Timbered Peak	Timbered Peak	21D1ba 36	6N 6E	3000	Thunder Basin	20A7 15	35N 14E	4200	Timbered Peak	21D1ba 36	35N 14E	4200														
Summit G. S.	Lewis River (continued)																											
Baird	Jack Woods	Jack Woods	Jack Woods	1BBlm 32	27N 34E	2440	Baker Pass	21C6 15	16N 10E	5300	Dock Butt	21A1a 36N	7E	4900														
Carlson	Krause	Krause	Krause	1BB3m 21	27N 33E	2420	Easy Pass	21C19 33	10N 7E	4100	Easy Pass	21A1a 19	39N 11E	5200														
Chewelah	Sheffels	Sheffels	Sheffels	1BB5m 21	27N 32E	2378	Mosquito Meadows	21C32 2B	15N 10E	2200	Jasper Pass	21A6a 17	37N 11E	5400														
Stranger Mountain	Wheatridge	Wheatridge	Wheatridge	1BB6m 24	27N 33E	2440	Ohanspecosh	21C31 21	13N 10E	2870	Komo Kulshan	21A17 31	37N 11E	800														
Togo	Ahtanum R. S.	Yakima River	Yakima River	1BBlm 24	25N 32E	2290	Packwood Lake	21C33 11	11N 10E	5900	Marten Lake	21A9a 23	3BN 10E	3600														
Sherman Creek Pass	Big Boulder Creek	Big Boulder Creek	Big Boulder Creek	21C1 26	12N 14E	3100	Potato Hill	21C14 36	10N 10E	4500	Mount Blum	21A18 27	3BN 10E	5800														
Okanogan River	Bumping Lake	Bumping Lake	Bumping Lake	21C2 23	16N 14E	3200	William Creek	21C30 3	13N 13N	3250	Schreibers Meadow	21A10a 1B	37N 9E	3400														
Clark	Colockum Pass	Colockum Pass	Colockum Pass	21C36 13	16N 12E	3450	S. F. Thunder Creek	21A4a 20	36N 9E	2200	Sulphur Creek	21A13 22	36N 9E	1600														
Muckamuck	Gooche Creek	Gooche Creek	Gooche Creek	20B9 20	20N 20E	3370	Three Mile Creek	21A15 1B	36N 9E	2000	Watson Lakes	21A8 25	37N 9E	4500														
Mutton Creek No. 1	Domery Flat	Domery Flat	Domery Flat	20B10 17	19N 20E	4123	Bald Mountain	21A23 20	9-10 3BN	5100	Canyon	21A23 9-10 3BN	7E	3700														
Mutton Creek No. 2	Fish Lake	Fish Lake	Fish Lake	21B4m 15	20N 14E	2200	Glacier Creek	21A26 17	39N 9E	4300	Panorama	21A25 17	39N 9E	4300														
Paysonay Creek	Green Lake	Green Lake	Green Lake	21B10 34	24N 14E	3571	Ghost Forest	21C4 23	15N 15N	4550	Panorama	21A25P 17	39N 9E	2760														
Rusty Creek	Grouse Camp	Grouse Camp	Grouse Camp	20B11 29	21N 19E	535B	Longnire Park (New)	21C35 13	15N 15N	5050	Panorama	21A21a 16	40N 9E	5200														
Salmon Meadows	High Creek	High Creek	High Creek	20B12 34	20N 19E	2930	Paradise Park (New)	21C35 13	15N 15N	5050	Paradise Park (New)	21C1 13	15N 15N	5050														
Starvation Mtn.	Joe Lake	Joe Lake	Joe Lake	20B14a 22	23N 12E	4624	Stem Glade	21B7 4	19N 20E	3360	Stem Glade	20B14 25	37N 7E	4400														
Touts Coulee	Lake Cle Elum	Lake Cle Elum	Lake Cle Elum	21B14m 15	20N 14E	2200	White River	21B13 30	1BN 11E	6000	White River	21C34 4	16N 9E	4200														
Billy Goat Pass	Lemah Creek	Lemah Creek	Lemah Creek	21B17 7	23N 13E	3327	White River Campground	21C34 1	13N 11E	4500	White River	21C1 13	15N 15N	4200														
Dollar Watch	Manastash	Manastash	Manastash	20C1 24	17N 16E	3935	White River Campground	21C34 1	13N 11E	4500	White River	21C34 4	16N 9E	4200														
Harts Pass	Napots Lake	Napots Lake	Napots Lake	21C17 6	16N 11E	3400	White Pass (Fast Side)	21C2B 2	13N 11E	4500	White Pass (Fast Side)	21C27 1	13N 11E	4500														
Horseshoe Basin	Trail Creek	Trail Creek	Trail Creek	20B14 4	20N 19E	3875	White Pass (Leach Lake)	21C27 1	13N 11E	4500	White Pass (Leach Lake)	21C27 1	13N 11E	4500														
Loup Loup	Tunnel Avenue	Tunnel Avenue	Tunnel Avenue	21B8 13	21N 11E	4250	Airstrip	21B24 1B	20N 11E	1800	Charley Creek	21B25 27	12N 11E	1200														
Rainy Pass	Van Epps Pass	Van Epps Pass	Van Epps Pass	21B26a 16	23N 15E	5925	Cougar Mountain	21B25P 21	21N 9E	3200	Cougar Mountain	21B25P 21	21N 9E	2900														
Safety Harbor	Walters Flat	Walters Flat	Walters Flat	20B15 22	20N 19E	3360	Grass Mountain No. 3	21B27 14	20N 11E	2100	Lester Creek	21B28 12	20N 10E	2100														
War Creek Pass	Waptus Lake	Waptus Lake	Waptus Lake	20B15 22	20N 19E	3360	Lynn Lake	21B28 12	20N 10E	3100	Sawmill Ridge	21B29 12	20N 10E	4000														
Cloudy Pass	White Pass (Fast Side)	White Pass (Fast Side)	White Pass (Fast Side)	21C2B 2	13N 11E	3024	Snowshoe Butte	21B31 5	19N 11E	4700	Snowshoe Butte	21B31 5	19N 11E	5000														
Greenwood Flat	White Pass (Leach Lake)	White Pass (Leach Lake)	White Pass (Leach Lake)	21C2B 2	13N 11E	4500	Stampede Pass	21B10 25	21N 11E	3000	Stampede Pass	21B30 1B	19N 11E	4100														
Little Meadows	White Pass (Leach Lake)	White Pass (Leach Lake)	White Pass (Leach Lake)	21C27 1	13N 11E	4500	Twin Camp	21B30 1B	19N 11E	4100	Twin Camp	21B30 1B	19N 11E	4100														
Lyman Lake	White Pass (Leach Lake)	White Pass (Leach Lake)	White Pass (Leach Lake)	21C27 1	13N 11E	4500	Four Stream	21B24 1B	20N 11E	1800	Four Stream	21B24 1B	20N 11E	1800														
Park Creek Flat	White Pass (Leach Lake)	White Pass (Leach Lake)	White Pass (Leach Lake)	21C27 1	13N 11E	4500	Home Sweet Home	21B25 27	21N 11E	1200	Home Sweet Home	21B25 27	21N 11E	1200														
Petersons	White Pass (Leach Lake)	White Pass (Leach Lake)	White Pass (Leach Lake)	21C27 1	13N 11E	4500	Sundown Pass	21B25P 21	21N 9E	3200	Sundown Pass	21B25P 21	21N 9E	3200														
Rainy Pass	White Pass (Leach Lake)	White Pass (Leach Lake)	White Pass (Leach Lake)	21C27 1	13N 11E	4500	Hurricane	21B29 36	20N 10E	3100	Hurricane	21B30 36	20N 10E	3100														
Safety Harbor	White Pass (Leach Lake)	White Pass (Leach Lake)	White Pass (Leach Lake)	21C27 1	13N 11E	4500	Deer Park	21B30 1B	19N 11E	4100	Deer Park	21B34 1B	19N 11E	4100														
Tommy Creek	White Pass (Leach Lake)	White Pass (Leach Lake)	White Pass (Leach Lake)	21C27 1	13N 11E	4500	Green River	21B24 1B	20N 11E	1800	Green River	21B24 1B	20N 11E	1800														
Berne-Mill Creek	Asotin Creek	Asotin Creek	Asotin Creek	21C4 9	BN 40E	5700	Morse Creek	21B24 1B	20N 11E	1800	Morse Creek	21B14 29	2BN 6W	5200														
Berne-Mill Creek (New)	Spruce Springs	Spruce Springs	Spruce Springs	21C4 9	BN 40E	5700	City Cabin	21B21 30	22N 10E	2390	City Cabin	21B14 29	2BN 6W	5900														
Blewett Pass No. 2	Qultus Creek	Qultus Creek	Qultus Creek	21C12 35	7N	BE 4000	Mt. Gardner Aux.	21B22 31	22N 10E	2500	Mt. Gardner Aux.	21B14 29	2BN 6W	5900														
Chiwaukum G. S.	Qultus Creek	Qultus Creek	Qultus Creek	21C12 35	7N	BE 4000	Mt. Lindsay	21B16 31	22N 9E	2500	Mt. Lindsay	21B16 31	22N 9E	3000														
Lake Wenatchee	Qultus Creek	Qultus Creek	Qultus Creek	21C12 35	7N	BE 4000	Mt. Washington	21B15 11	21N 9E	2400	Mt. Washington	21B17 11	21N 9E	2400														
Pope Ridge	Qultus Creek	Qultus Creek	Qultus Creek	21C12 35	7N	BE 4000	Rex River	21B16 24	21N 10E	3000	Rex River	21B16 24	21N 10E	3000														
Push Ridge	Qultus Creek	Qultus Creek	Qultus Creek	21C12 35	7N	BE 4000	South Fork Cedar	21B17 1	21N 10E	3000	South Fork Cedar	21B17 1	21N 10E	3000														
Shady Pass	Qultus Creek	Qultus Creek	Qultus Creek	21C12 35	7N	BE 4000	Tinkham Creek	21B20 1	21N 10E	3400	Tinkham Creek	21B20 1	21N 10E	3400														
Show Brushy	Qultus Creek	Qultus Creek	Qultus Creek	21C12 35	7N	BE 4000	Snoqualmie River	21B4B 31	27N 9E	3500	Snoqualmie River	21B4B 31	27N 9E	3500														
Tommy Creek	Qultus Creek	Qultus Creek	Qultus Creek	21C12 35	7N	BE 4000	Ovalie Meadows	21B2 19	22N 11E	3625	Ovalie Meadows	21B2 19	22N 11E	3625														
Berne-Mill Creek	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	South Fork Tolt	21B1B 26	26N 9E	1900	South Fork Tolt	21B1B 26	26N 9E	1900														
Entiat River Trail	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	Leavenworth R. S.	21B17 1	21N 10E	3000	Leavenworth R. S.	21B17 1	21N 10E	3000														
Fox Camp	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	Merritts Pass	21B17 1	21N 10E	3000	Merritts Pass	21B17 1	21N 10E	3000														
Pope Ridge Snow Pillow	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	Stevens Pass Sand Shed	21B18 24	21N 9E	4200	Stevens Pass Sand Shed	21B18 24	21N 9E	4200														
Push Ridge	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	Trough #2	21B19 33	26N 10E	2900	Trough #2	21B19 33	26N 10E	2900														
Shady Pass	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	21B2SSP 10	20N 20E	3310	21B2SSP 10	20N 20E	3310	21B2SSP 10															
Show Brushy	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	21B18a 24	24N 9E	4200	21B18a 24	24N 9E	4200	21B18a 24															
Tommy Creek	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	21B18a 24	24N 9E	4200	21B18a 24	24N 9E	4200	21B18a 24															
Berne-Mill Creek (New)	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	21B18a 24	24N 9E	4200	21B18a 24	24N 9E	4200	21B18a 24															
Blewett Pass No. 2	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	21B18a 24	24N 9E	4200	21B18a 24	24N 9E	4200	21B18a 24															
Chiwaukum G. S.	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	21B18a 24	24N 9E	4200	21B18a 24	24N 9E	4200	21B18a 24															
Lake Wenatchee	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	21B18a 24	24N 9E	4200	21B18a 24	24N 9E	4200	21B18a 24															
Pope Ridge	White Salmon River	White Salmon River	White Salmon River	21C12 35	7N	BE 4000	21B18a 24	24N 9E	4200	21B18a 24	24N 9E																	



INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STATIONS

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	LEV.	NAME	NUMBER	SEC.	TWP.	RANGE	LEV.	NAME
UPPER COLUMBIA DRAINAGE																		
Pond Oreille River	20B22	11	20N	20E	5300	Coleckum Creek	20B22	11	20N	20E	5300	Divide Meadow	21C29a	21	9N	10E	5600	Beaver Creek Trail
Boyer Mountain	17A2	7	31N	43E	5250	Coleckum Creek	20B23	1	20N	20E	4300	Grand Meadow	21C22	2B	BN	9E	3500	Beaver Pass
Bunchies Meadow	17A1	24	37N	44E	5000	Squilchuck Creek	20B3	1	20N	20E	4300	Lone Pine Shelter	21C22	B	BN	9E	3800	Brown Top
Winchester Creek	17A3	50	33N	43E	2970	Bechive Springs	20B3	12	21N	19E	4400	Marble Mountain	22C5a	24	BN	5E	3200	Devils Park
Kettle River	18A2	36	39N	36E	1450	Scout-A-Vista	20B4	18	21N	20E	3400	New Muddy River	22C6	36	BN	8E	4000	Freezeout Greek Trail
Boulder Road	18A3	28	39N	35E	4070	Jump-Off	20B6	34	21N	20E	4450	Plains of Abraham	21D19	22	6N	7E	3100	Freezeout Meadows
Butte Creek	18AB	5	31N	36E	3170	Stemilt Slide	20B6	30	21N	20E	5000	Smith Creek Road	22C4a	35	9N	5E	4400	Granite Creek
Cabin Creek	18A4	26	39N	35E	3535	Upper Wheeler	20B7PM	30	21N	20E	4100	Spencer Meadow	21C20a	16	BN	7E	3400	Lake Holzmoen
Gout Creek	18AS	5	33N	36E	2720	Crab Creek	21C11	26	12N	14E	3100	Surprise Lakes ¹	21C13a	14	7N	BE	4250	Meadows Cabins
Snow Cap Creek	18A6	3	33N	36E	2720	Creston-Kunz	21C24a	20	9N	9E	4200	Table Mountain ¹	21A30	19	4DN	14E	2800	New Horzonien Lake
Summit G. S.	18A7	20	39N	35E	4600	Jack Woods	21D1Ba	36	6N	6E	3000	Timbered Peak	20A7	15	35N	14E	4200	Thunder Basin
Baird	17A6	19	36N	42E	3215	Colville River	1BB3m	28	27N	31E	2440	Baker Pass	21A27a	1	37N	7E	4900	Baker Pass
Carlson	18A9	34	32N	38E	2885	Sheffels	1BB4m	21	27N	33E	2420	Dock Butte	21A11a	B	36N	BE	3800	Easy Pass
Chewelah	17A4	11	32N	41E	4925	Sherman	1BB5m	17	27N	32E	2378	Mosquito Meadows	21A7a	19	35N	11E	5200	Jasper Pass
Stranger Mountain	17AS	26	31N	38E	4990	Wheatridge	1B86m	24	25N	33E	2440	Okanogan	21C32	2B	15N	10E	2200	Komo Kalishan
Togo	18A10	6	29N	38E	3370	Yakima River	21C11	26	12N	14E	3100	Packwood Lake	21C31	21	13N	10E	2800	Marion Lake
Sherman Creek Pass	1BA1	19	36N	35E	5350	Ahtanum R. S.	21B9	35	23N	14E	3200	Pigtail Peak	21C33	11	13N	11E	800	Mount Blum
Clark	19A8a	2	36N	23E	7000	Big Boulder Creek	21C12	23	16N	12E	3450	Potato Hill	21C14	36	10N	10E	3600	Rocky Creek
Murton Creek No. 1	19A9a	20	36N	24E	6750	Bumping Lake	21C13	13	16N	12E	3400	William Creek	21C15a	20	36N	9E	2200	Schreibers Meadow
Murton Creek No. 2	19A1	30	37N	24E	5700	Bumping Lake New	21C16	16	20N	20E	3370	Collockum Pass	21A13	22	37N	8E	1600	S. F. Thunder Creek
Payson Creek	19A4	19A4	37N	24E	6000	Collockum Pass	20B9	25	20N	20E	4125	Three Mile Creek	21A15	17	36N	9E	1600	Sulphur Creek
Rusty Creek	19A3P	18	35N	24E	4500	Fish Lake	21B4	34	20N	14E	2200	Watson Lakes	21A15	25	37N	9E	4500	Watson Lakes
Salmon Meadows	19A10a	15	35N	23E	6750	Green Lake	20B11	29	21N	19E	5000	Bald Mountain	21A2a	40N	7E	3400	Bald Mountain	
Starvation Mtn.	19A6	30	39N	25E	2845	Grouse Camp	20A28a	32	40N	18E	2930	Canyon Creek	21A20a	20	40N	BE	5100	Canyon Creek
Touts Coulee	19A7	36	34N	23E	4650	High Creek	20B12	34	20N	19E	4624	Glacier Creek	21A23	9-10	38N	7E	3700	Glacier Creek
Methow River	20A10a	10	38N	20E	6400	Joe Lake	21B14M	25	20N	14E	2200	Panorama New	21A26	17	39N	9E	4300	Panorama New
Billy Goat Pass	20A29a	20	39N	20E	7000	Lake Cle Elum	21B47a	23N	13E	3327	Panorama Snow Pillow	21A25SP	17	39N	9E	4300	Panorama Snow Pillow	
Dollar Watch	20A5A	7	37N	18E	6500	Lemah Creek	20B15	27	17N	16E	3935	Ghost Forest	21C4	23	15N	BE	4550	Ghost Forest
Harts Pass	19A5a	15	40N	23E	7000	Manastash	21C17	6	16N	11E	5400	Longmire	21C3	29	15N	BE	2760	Longmire
Horseshoe Basin	19A7	36	34N	23E	4650	Napots Lake	21C27	1	13N	11E	4500	Paradise Park (New)	21C35	13	15N	BE	5050	Paradise Park (New)
Loup Loup	20A31a	34	33N	18E	6500	White Lake	21C2B	2	13N	11E	4500	Corral Pass	21B13	30	1BN	11E	6000	White River
Cloudy Pass	20A22a	12	31N	15E	6500	White Pass (Fast Side)	21C27	1	13N	11E	4500	White Pass Glade	21C34	4	16N	9E	5200	White River
Greenwood Flat	20A29a	10	38N	20E	6400	White Pass (Leach Lake)	21C27	1	13N	11E	4500	White Pass Glade	21C34	1	2BN	SW	5200	White River
Little Meadows	20A24a	8	31N	16E	3540	Airstrip	21B24	1B	20N	11E	1800	Wilde Park	21B25	27	21N	8E	3200	Wilde Park
Lyman Lake	20A23a	1B	31N	16E	5275	Charley Creek	21B25P	21	21N	9E	3200	Cox Valley	23814	29	2BN	GW	3200	Cox Valley
Park Creek Flat	20A13a	1B	34N	16E	5900	Cougar Mountain	21B27	14	20N	14E	2900	Elwha River	23814	29	2BN	GW	3200	Elwha River
Park Creek Ridge	20A12a	7	34N	16E	4600	Grass Mountain No. 2	21B28	12	20N	14E	2100	Four Stream	23B1	25	24N	SW	3900	Four Stream
Petersons	20A16a	3	34N	17E	3730	Lester Creek	21B29	36	20N	10E	3100	Home Sweet Home	23B6	16	24N	SW	3000	Home Sweet Home
Rainy Pass	20A9	21	35N	17E	47B0	Sawmill Ridge	21B31	5	19N	11E	4700	Sundown Pass	23B6	16	24N	SW	3000	Sundown Pass
Safety Harbor	20A30a	32	31N	20E	6300	Snowshoe Butte	21B50	21	20N	19E	3360	Stampede Pass	21B10	25	21N	10E	3000	Stampede Pass
War Creek Pass	20A31a	34	33N	18E	6500	Twin Camp	21B30	18	19N	11E	4100	Black and White Lakes	23B7	17	24N	SW	4200	Black and White Lakes
Brief	20B19	34	28N	19E	1600	Spruce Springs	17C4	9	BN	40E	5700	Deer Park	23B10	1	23N	SW	3000	Deer Park
Entiat Meadows	20A35a	2B	31N	17E	5275	Mill Creek	21B23	10	21N	10E	2390	Morse Creek	23B15	28	25N	SW	5200	Morse Creek
Lyman Lake	20A34a	2	31N	17E	3150	City Cabin	21B21	30	22N	10E	3300	Soleduck River	23B18	25	24N	SW	3900	Soleduck River
Pope Camp	20A36a	17	30N	18E	6510	Coose	17C3m	2	9N	40E	4030	Deer Lake	23B1	14	21N	9E	3000	Deer Lake
Pope Ridge	20B20	22	29N	18E	4300	Martins Springs (Heimers SM)	17CN	11	40E	4400	Mt. Gardner Aux.	21B22	31	22N	10E	2500	Mt. Gardner Aux.	
Push Ridge	20A24Sp	22	29N	18E	4300	White Pass	21B16	31	22N	10E	2500	Linday	21B17	11	21N	9E	3000	Linday
Shady Pass	20A57	20	29N	19E	6200	Klickitat River	20D1	21	6N	17E	4030	Rex River	21B17	11	21N	9E	2400	Rex River
Show Brushy	20A35a	21	30N	17E	3850	Status Pass	21C15	23	9N	12E	3000	South Fork Cedar	21B6	24	21N	10E	3000	South Fork Cedar
Tommy Creek	20B21a	10	28N	18E	5300	West Fork Cabin	21C15	23	9N	12E	3000	Tinkham Creek	21B20	1	21N	10E	3400	Tinkham Creek
Berne-Mill Creek (New)	21B23	7	26N	15E	2925	White Salmon River	21C12	35	7N	BE	4000	Snoqualmie River	21B1B	31	27N	9E	3500	Snoqualmie River
Blewett Pass No. 2	20B12	35	22N	17E	4274	Cultus Creek	21C12	35	7N	BE	4000	Alpine Meadow	21B1B	31	27N	11E	3625	Alpine Meadow
Chiwaukum G. S.	20B16	4	25N	17E	1810	Leavenworth R. S.	20B5	33	27N	17E	1970	Chiwaukum South Fork Tolt	21B1B	26	26N	9E	1900	Chiwaukum South Fork Tolt
Merritt	20B17	1	24N	17E	1127	Blue Lake	21B17	11	21N	9E	2400	Bob's Trail	21B17	11	21N	9E	2400	Bob's Trail
Stevens Pass	21B1	14	26N	13E	4070	Calanity Ridge	21B14	12	26N	13E	3700	Council Pass	21B14	24	21N	9E	4200	Council Pass
Trough # 2	20B25Sp	10	20N	20E	5310	White Salmon River	21C1B	24	9N	9E	4200	Lake Elizabeth	21B19	33	26N	10E	2900	Lake Elizabeth

LEGEND
 NUMBERING SYSTEM EXAMPLE
 SNOW COURSE ONLY
 AERIAL MARKER ONLY
 SNOW COURSE AND AERIAL MARKER
 SNOW COURSE AND SOIL MOISTURE STATION
 SOIL MOISTURE STATION
 DIVISION OF PRECIPITATION STORAGE GAGE
 SNOW PILLOW
 SNOW PILLOW

WATER SUPPLY OUTLOOK

State of Washington
April 1, 1972

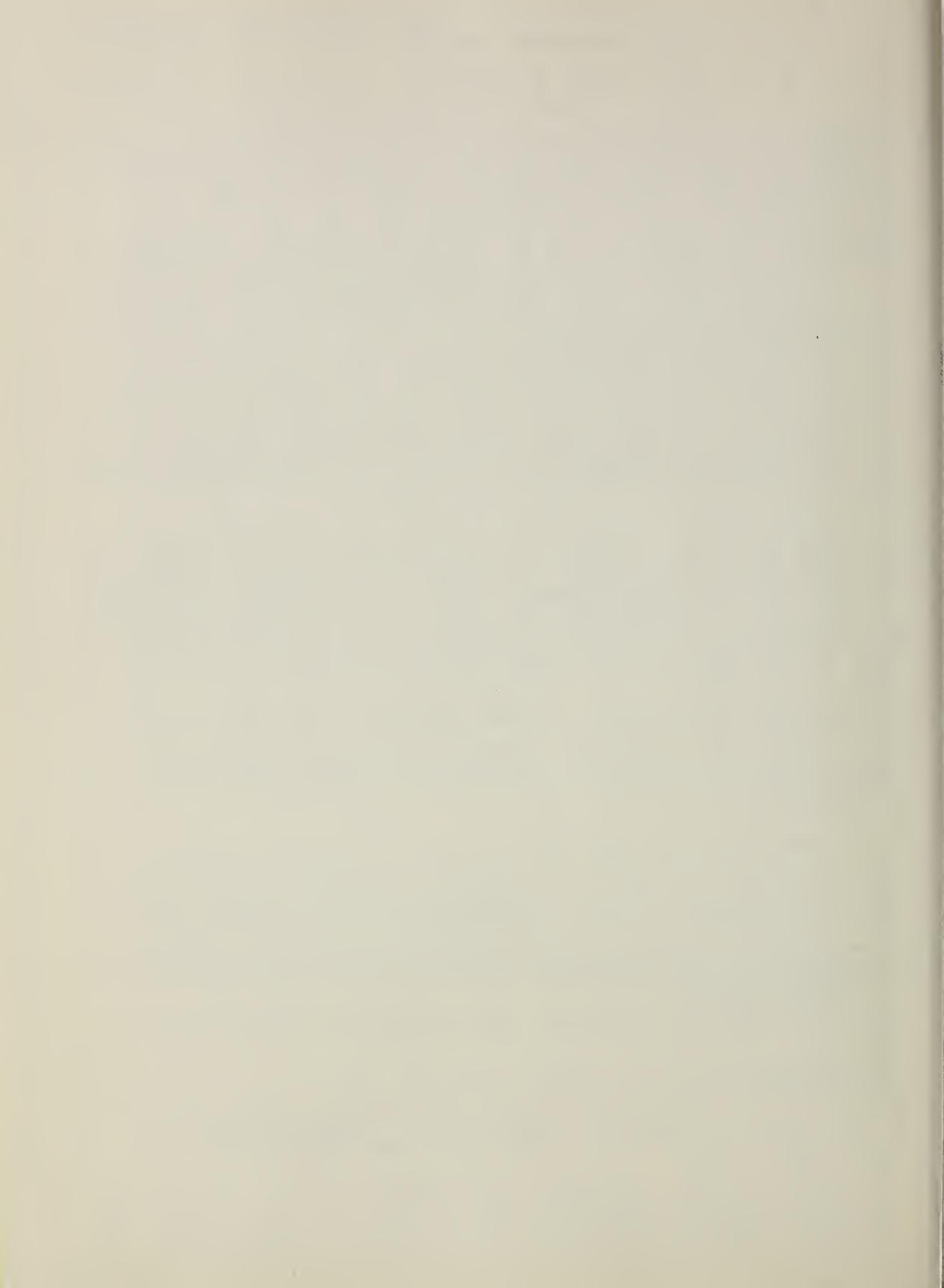
* As was reported last month the water supply outlook for the State *
* of Washington and tributary streams continues to be excellent and *
* the record and/or near record forecasts made last month are fun- *
* damentally the same. There have been increases in some forecasts *
* where the larger portion of the water comes from high elevations *
* and there have been decreases in others where the watershed ele- *
* vation is lower. A great deal of the snowpack that occurred at *
* the lower elevations has run off and resulted in well above-normal *
* streamflows during the month of March. Along the main stem the *
* forecast should be increased due to the 6% increase forecasted *
* for the Columbia River at Birchbank. This, undoubtedly, will be *
* reflected along the stem and will result in higher flows than *
* previously anticipated at The Dalles. Temperatures were general- *
* ly warmer than normal over the basin which further consolidated *
* the heavy, dense snowpack. This, in connection with the general- *
* ly above-normal precipitation is the cause of both the increase *
* in forecasted amounts as well as the high flows. The snow cover *
* now ranges from a low of 30% below normal in the northeast to a *
* high of 107% above normal in the Yakima watershed. As we stated *
* last month, this low-elevation snowpack has a tendency to flash *
* off early causing local damage and as you can see this has occur- *
* red. If the weather patterns remain as they are now, with the *
* above-normal precipitation and temperatures, the high flows that *
* are now being experienced should continue but to a lesser degree *
* for the remainder of the runoff period.

* The winter precipitation was above normal over the entire state *
* with the exception of the northeastern portion. The spring pre- *
* cipitation, as stated above, continues this above-normal regime *
* with again the northeastern portion reporting below-normal rain- *
* fall. *

* Reservoir storage again has little meaning as reservoir managers *
* are attempting to lower their reservoirs to contain the expected *
* high flows but with little affect. The flows downstream from *
* these reservoirs continue to be maintained at flood stage but the *
* uncontrolled flows from tributary basins do not permit as fast a *
* drawdown as the flood management agencies would like to see. Flows *
* during the month were all well above normal, ranging as high as *
* 450% of normal. *

SNOW COVER

The Colville and Klickitat drainages again have the least amount of snow cover of any reported in the state. These watersheds are gaged



by low-elevation snow courses only. Other drainages in the northeast portion of the state have a snow cover that ranges from 16% below normal to 16% above. The snowpack in the Okanogan drainage, both the Canadian and United States portions, is 63% above normal. Along the east side of the Cascades the snowpack ranges from 50% above normal to the previously mentioned 107% above on the Yakima drainage. On the lower Columbia the higher elevation watersheds have a snow cover that ranges from 21% above normal to 53% above. The Puget Sound drainage snow cover ranges from 28% above to 75% above. On the Olympic Peninsula the snow cover is considerably less, ranging from 2% above on the Elwha to 21% above for the Skokomish.

RESERVOIRS

With the exception of Franklin D. Roosevelt reservoir all the rest have more water in storage than normal for this time of year. Again, as stated above, these reservoirs are filling faster than the flood control agencies would like to see but they cannot be lowered due to high flows occurring below the reservoirs.

PRECIPITATION

During the month of March the National Weather Service reported precipitation to be well above normal over the entire Columbia Basin with the exception of the northeastern part of Washington.

STREAMFLOW

All streams in the State of Washington are flowing at a much higher percentage than normal for this time of year. This is the result of the above mentioned above-normal precipitation and temperatures. The low-elevation snowpack is pretty well gone and the middle elevation going fast. This, together with the rain, is accounting for these high flows. The forecasted streamflows range from 9% above normal on the Olympic Peninsula to a high of nearly 70% above on the Yakima. Many of these forecasted flows are for record amounts. Numerical forecasts can be found elsewhere in this report.

STREAMFLOW FORECASTS - APRIL 1972

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviation from normal of temperature and/or precipitation will correspondingly modify these forecasts. Streamflow figures for 1971 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1972	% 15-Yr. Avg.	Fore- cast Period	Seasonal Streamflow in Thousands of Acre-Feet			15-Yr Average 1953-67				
				1971	1970	1969					
<u>COLUMBIA BASIN</u>											
<u>Columbia River System</u>											
Columbia River											
at Birchbank 1/											
56410	122		Apr-Sep	48592	34553	48001	46368				
46500	124		Apr-Jul	39462	27931	40567	37480				
34100	126		Apr-Jun	29759	20952	32193	27040				
Columbia River											
at Grand Coulee 1/											
90000	130		Apr-Sep	75360	54617	74617	69458				
78000	132		Apr-Jul	64444	46563	65587	58899				
61000	133		Apr-Jun	51550	37574	54513	45889				
Columbia River											
bl. Rock Island Dam 1/											
99000	130		Apr-Sep	84965	58544	79675	76241				
84900	131		Apr-Jul	73096	50236	70515	64777				
66000	131		Apr-Jun	58245	40675	58851	50387				
Columbia River											
at The Dalles, OR 1/											
139000	132		Apr-Sep	123427	88146	112281	105176				
120000	133		Apr-Jul	107702	76054	100113	90050				
97800	135		Apr-Jun	88936	62847	85657	72410				
<u>Pend Oreille River System</u>											
<u>Pend Oreille River</u>											
bl. Box Canyon											
22600	141		Apr-Sep		14737	16166	16030				
21000	142		Apr-Jul		13676	15055	14788				
18200	143		Apr-Jun		11985	13033	12754				
<u>Kettle River System</u>											
<u>Kettle River</u>											
nr. Laurier											
2150	112		Apr-Sep	2240	1099	2239	1918				
2080	114		Apr-Jul	2177	1068	2188	1821				
1910	116		Apr-Jun	1927	1004	2048	1644				

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

Streamflow Forecasts - April 1972 (Cont.)

Basin, Stream and Station	Forecast Runoff 1972	% 15-Yr. Avg.	Fore- cast Period	Seasonal Streamflow in Thousands of Acre-Feet			15-Yr. Average 1953-67				
				1971	1970	1969					
<u>Kettle River System, (Cont.)</u>											
<u>Colville River</u>											
at Kettle Falls	183	119	Apr-Sep	94	270	153					
	169	120	Apr-Jul	86	256	141					
	157	120	Apr-Jun	80	240	131					
<u>Spokane River System*</u>											
<u>Spokane River</u>											
at Post Falls ID <u>2/</u>	4500	143	Apr-Sep		3552	3151					
	4390	144	Apr-Jul		3463	3055					
	4190	144	Apr-Jun		3350	2913					
<u>Okanogan River System**</u>											
<u>Similkameen River</u>											
nr. Nighthawk	2290	150	Apr-Sep	1924	850	1199	1525				
	2130	150	Apr-Jul	1827	808	1150	1419				
	1820	152	Apr-Jun	1552	739	1052	1197				
<u>Okanogan River</u>											
nr. Tonasket	2610	150	Apr-Sep	2236	923	1448	1738				
	2370	150	Apr-Jul	2080	864	1353	1578				
	1960	149	Apr-Jun	1769	785	1231	1318				
<u>Methow River System**</u>											
<u>Methow River</u>											
nr. Pateros	1600	152	Apr-Sep		622	1060	1054				
	1500	153	Apr-Jul		587	1013	981				
	1310	157	Apr-Jun		532	948	834				
<u>Chelan River System</u>											
<u>Chelan River</u>											
at Chelan <u>3/</u>	1890	149	Apr-Sep	1550	905	1337	1266				
	1680	150	Apr-Jul	1352	816	1230	1119				
	1320	152	Apr-Jun	1019	683	1093	870				
<u>Stehokin River</u>											
at Stehekin	1380	152	Apr-Sep		678	961	904				
	1180	153	Apr-Jul		589	853	772				
	897	153	Apr-Jun		478	748	586				
<u>Entiat nr.</u>											
Ardenvoir	292	--	Apr-Sep		160	265	--				
	271	--	Apr-Jul		148	249	--				
	224	--	Apr-Jun		129	227	--				

* Forecasts made by J. Alden Wilson, Soil Conservation Service, Boise, Idaho.

** These forecasts are based in part upon base flow data especially prepared and furnished for this purpose by the U. S. Geological Survey.

2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie Canals.

3/ Observed flow corrected for storage in Lake Chelan.

Streamflow Forecasts - April 1972 (Cont.)

Basin, Stream and Station	Forecast Runoff 1972	% 15-Yr. Avg.	Fore- cast Period	Seasonal Streamflow in Thousands of Acre-Feet			15-Yr. Average 1953-67				
				1971	1970	1969					
Wenatchee River System											
Wenatchee River											
at Plain	1940	146	Apr-Sep	1019	1443	1333					
	1770	147	Apr-Jul	941	1349	1204					
	1400	147	Apr-Jun	804	1217	952					
Wenatchee River at Peshastin	2780	153	Apr-Sep	1416	1953	1814					
	2530	153	Apr-Jul	1318	1840	1651					
	2030	154	Apr-Jun	1132	1669	1316					
Stemilt Basin nr. Wenatchee	162*	--	May-Sep			145*					
Yakima River System											
Yakima River											
nr. Martin <u>4/</u>	218	150	Apr-Sep	195	131	156	145				
	202	151	Apr-Jul	182	123	144	134				
	176	152	Apr-Jun	142	114	136	116				
Yakima River at Cle Elum <u>5/</u>	1480	153	Apr-Sep	866	1051	968					
	1360	154	Apr-Jul	803	977	885					
	1190	156	Apr-Jun	723	912	762					
Yakima River nr. Parker <u>6/</u>	2870	165	Apr-Sep	1491	1989	1738					
	2840	165	Apr-Jul	1512	2005	1722					
	2580	163	Apr-Jun	1461	1980	1583					
Kachess River nr. Easton <u>7/</u>	201	157	Apr-Sep	173	115	139	128				
	193	158	Apr-Jul	164	112	134	122				
	169	158	Apr-Jun	131	104	128	107				
Cle Elum River nr. Roslyn <u>8/</u>	742	153	Apr-Sep	626	435	496	485				
	685	154	Apr-Jul	567	402	473	445				
	574	154	Apr-Jun	433	350	440	373				
Bumping River nr. Nile <u>9/</u>	236	157	Apr-Sep	187	129	150	150				
	218	158	Apr-Jul	168	122	142	138				
	181	159	Apr-Jun	118	107	133	114				

* Thousands of Miners' inches.

4/ Observed flow corrected for storage in Lake Keechelus.

5/ Observed flow corrected for storage in Keechelus, Kachess and Cle Elum Lakes and diversion by Kittitas Canal.

6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation and Sunnyside Canals.

7/ Observed flow corrected for storage in Lake Kachess.

8/ Observed flow corrected for storage in Lake Cle Elum.

9/ Observed flow corrected for storage in Bumping Lake.

Streamflow Forecasts - April 1972 (Cont.)

Basin, Stream and Station	Forecast Runoff 1972	% Avg.	Seasonal Streamflow in Thousands of Acre-Feet				15-Yr. Average 1953-67			
			15-Yr. Avg.	Fore- cast Period	1971	1970				
<u>Yakima River System (Cont.)</u>										
American River										
nr. Nile	202	157	Apr-Sep		128	138	129			
	188	157	Apr-Jul		120	130	120			
	156	158	Apr-Jun		106	120	99			
Tieton River at Tieton Dam <u>10/</u>	394	157	Apr-Sep	323	244	273	251			
	346	161	Apr-Jul	268	207	244	215			
	281	163	Apr-Jun	197	172	220	172			
Naches River nr. Naches <u>11/</u>	1440	160	Apr-Sep		841	994	899			
	1330	162	Apr-Jul		779	926	819			
	1140	163	Apr-Jun		694	857	698			
Ahtanum Creeks nr. Tampico <u>12/</u>	74	150	Apr-Sep		43	57	49			
	68	152	Apr-Jul		39	53	45			
	62	154	Apr-Jun		35	49	40			
<u>Lower Columbia River System</u>										
Mill Creek										
nr. Walla Walla	37	128	Apr-Sep		27	32	29			
	32	128	Apr-Jul		23	29	25			
	30	130	Apr-Jun		21	27	23			
Lewis River at Ariel <u>13/</u>	1890	139	Apr-Sep		914	1613	1358			
	1720	144	Apr-Jul		798	1431	1197			
	1520	144	Apr-Jun		723	1303	1059			
Cowlitz River bl. Mayfield Dam	2960	137	Apr-Sep		1615	2230	2160			
	2630	138	Apr-Jul		1425	2002	1908			
	2180	135	Apr-Jun		1245	1802	1612			
Cowlitz River at Castle Rock <u>14/</u>	3750	133	Apr-Sep		2134	2965	2818			
	3370	136	Apr-Jul		1873	2641	2487			
	2820	133	Apr-Jun		1652	2359	2119			
<u>OLYMPIC PENINSULA</u>										
<u>Dungeness River System</u>										
Dungeness River nr. Sequim	187	109	Apr-Sep		136	195	172			
	155	110	Apr-Jul		115	167	141			
	117	111	Apr-Jun		89	139	105			

10/ Observed flow corrected for storage in Rimrock Lake.

11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals and City of Yakima.

12/ Observed flow of North and South Forks (combined).

13/ Observed flow corrected for storage in Lake Merwin, Yale and Swift Reservoirs.

14/ Observed flow corrected for storage in Mayfield Reservoir.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about April 1, 1972, as per cent of the same date in 1971 and 1970 and average of record.

Tributary Basin	No. of Courses	Years of Record	1972 Snow 1971	Water Expressed as per cent of 1970	1953-67
	Average				
<u>UPPER COLUMBIA BASIN</u>					
Pend Oreille	14 - 17	8 - 35	94	125	115*
Kettle	12	9 - 34	83	139	106*
Colville	3	13	49	76	70*
Spokane	16	8 - 35	106	145	130*
Sanpoil	1	33	81	95	84
Okanogan	32 - 35	7 - 37	112	180	163*
Methow	8	11 - 30	110	160	155*
Chelan	4	11 - 40	114	218	162*
Entiat	8 - 9	5 - 7	102	185	150*
Wenatchee	8 - 10	11 - 40	107	192	190*
Yakima	22 - 23	6 - 52	102	202	207*
Ahtanum	1 - 2	23	42	98	126*
<u>LOWER COLUMBIA</u>					
Mill Creek	3	7 - 22	102	171	121*
Klickitat	1	15	42	84	69*
White Salmon	2	28	90	182	140*
Lewis	14 - 18	11 - 28	70	267	126*
Cowlitz	10	9 - 32	96	504	153*
<u>PUGET SOUND</u>					
Nisqually	3 - 4	7 - 22	104	204	175*
White	3	16 - 32	94	173	139*
Green	5 - 10	11 - 26	88	206	128*
Cedar	5 - 6	10 - 11	89	339	139*
Snoqualmie	2 - 3	4 - 26	89	193	156*
Skykomish	2 - 3	14 - 25	98	200	156*
Skagit	13 - 16	21 - 40	105	483	163*
Baker	7 - 11	3 - 14	83	223	136*
<u>OLYMPIC PENINSULA</u>					
Skokomish	3 - 4	8 - 22	73	201	121*
Elwha	1	22	75	199	102
Dungeness	1	22	81	155	106*

* Records of less than 15 years used on computation of averages

RESERVOIR STORAGE - 1000 Acre Feet

<u>BASIN or STREAM</u>	<u>RESERVOIR</u>	<u>USABLE 1/ CAPACITY</u>	1972	<u>Measured April</u>		
				1971	1970	Normal*
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	335.2	137.9	133.8	164.0
Columbia	Franklin D. Roosevelt Lake	5232.0	1242.4	1534.2	2111.5	2359.6
Columbia	Banks Lake	761.8	680.2	674.8	698.9	499.3
Okanogan	Conconully Reservoir	13.0	10.8	6.1	8.0	6.7
Okanogan	Salmon Lake	10.5	8.6	2.1	7.4	8.5
Chelan	Lake Chelan	676.1	199.5	179.9	22.0	169.0
<u>YAKIMA</u>						
Yakima	Keechelus Lake	157.8	127.5	122.4	76.0	102.8
Kachess	Kachess Lake	239.0	215.3	190.7	181.5	184.4
Cle Elum	Lake Cle Elum	436.9	326.9	251.8	199.5	278.8
Bumping	Bumping Lake	33.7	9.1	3.3	7.2	14.0
Tieton	Rimrock Lake	198.0	145.1	139.6	110.1	135.8
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir	1202.9	833.0	757.2	568.5	715.2
Skagit	Diablo Reservoir	90.6	87.8	84.3	96.6	85.5
Skagit	Gorge Reservoir	9.8	7.8	8.3	8.4	--

1/ Based on Active Storage

* 15-year average 1953-67



SOIL MOISTURE - April

Drainage Basin and Station	Number	Elev.	Profile Depth	(Inches):		Soil Moisture Content (Inches) as of Apr. 1		
				Total : Capacity:	1972	1971	1970	
CRAB CREEK								
Jack Woods	18B3m	2750	48	13.6	9.6	10.1	10.4	
Krause	18B4m	2420	48	13.6	9.2	9.3	9.6	
Sheffels	18B5m	2380	48	13.6	9.7	9.1	8.2	
Sherman	18B7m	2440	48	13.6	9.0	8.9	8.2	
Wheatridge	18B6m	2290	48	13.6	10.4	10.4	9.5	
OKANOGAN								
Salmon Meadows	19A2M	4500	48	5.4	3.7	3.6	2.4	
Trout Creek	3-M	3600	48	7.3	Late Report	2.9*	--	
YAKIMA								
Domery Flat	21B20m	2200	48	6.9	Not Measured	4.9	5.6	
Lake Cle Elum	21B14M	2200	48	12.8	Not Measured	9.2	9.2	
WALLA WALLA								
Couse	17C3m	3650	48	11.1	10.5	10.6	10.4	
Helmers	17C2M	4400	48	12.0	10.6	11.0	11.2	
WENATCHEE								
Upper Wheeler	20B7M	4400	48	12.7	12.4	10.1*	6.9	

* March 1 measurement

FALL SOIL MOISTURE

Drainage Basin and Station	Number	Elev.	Profile Depth	(Inches):		Soil Moisture Content (Inches) as of Oct. 1		
				Total : Capacity:	1971	1970	1969	
CRAB CREEK								
Jack Woods	18B3m	2750	48	13.6	5.3	7.0	7.5	
Krause	18B4m	2420	48	13.6	5.0	4.4	5.9	
Sheffels	18B5m	2380	48	13.6	5.3	4.4	4.5	
Sherman	18B7m	2440	48	13.6	4.0	3.8	4.2	
Wheatridge	18B6m	2290	48	13.6	5.5	7.8	5.4	
OKANOGAN								
Salmon Meadows	19A2M	4500	48	5.4	2.7	1.7	2.7	
Trout Creek	3-M	3600	48	7.3	3.3	3.4*	3.8*	
YAKIMA								
Domery Flat	21B20m	2200	48	6.9	2.1	2.4	--	
Lake Cle Elum	21B14M	2200	48	12.8	7.1	7.6	--	
WALLA WALLA								
Couse	17C3m	3650	48	11.1	6.2	5.9	6.1	
Helmers	17C2M	4400	48	12.0	8.2	7.3	7.1	
WENATCHEE								
Upper Wheeler	20B7M	4400	48	12.7	6.5	5.1	9.8	

* Nov 1 measurement

PRECIPITATION 1/

Division Averages and Departures

Drainage Divisions	FALL			WINTER		
	Sep - Oct Observed	1971 Departure	2/	Nov - 1971 Observed	Mar 1972 Departure	2/
Columbia in Canada	4.45	+ 0.56		18.14	+ 5.45	
Pend Oreille - Spokane	4.63	+ 0.48		22.16	+ 3.91	
Northeastern Washington	3.16	+ 0.91		9.92	- 1.17	
Southeastern Washington	3.73	+ 1.08		15.47	+ 3.06	
Central Washington	4.15	- 0.29		39.29	+12.16	
North Central Washington	1.99	+ 0.58		10.09	+ 3.75	
Northwest Slope Cascades	11.60	- 0.07		66.90	+14.76	
Southwest Slope Cascades	9.33	+ 1.61		54.96	+14.09	

Northeastern Washington

- Lower Spokane, Colville, Sanpoil and lower Kettle drainages.

Southeastern Washington

- Touchet, Tucannon and Palouse drainages.

Central Washington

- Yakima, Wenatchee and Chelan drainages.

North Central Washington

- Methow and Okanogan drainages.

Northwest Slope Cascades

- Puget Sound drainages.

Southwest Slope Cascades

- Lower Columbia drainages.

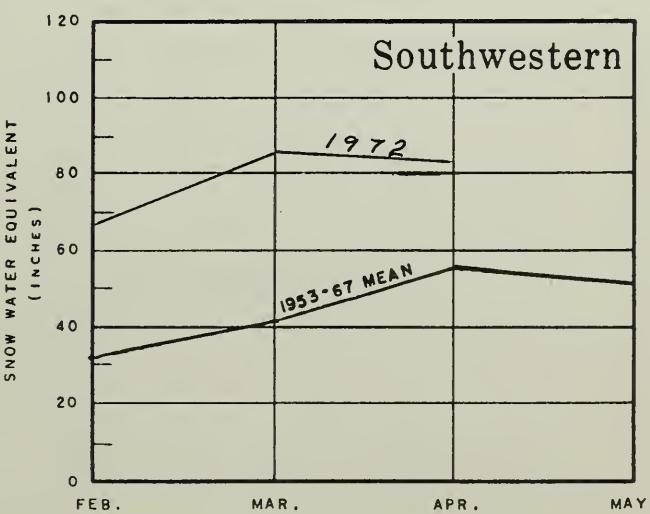
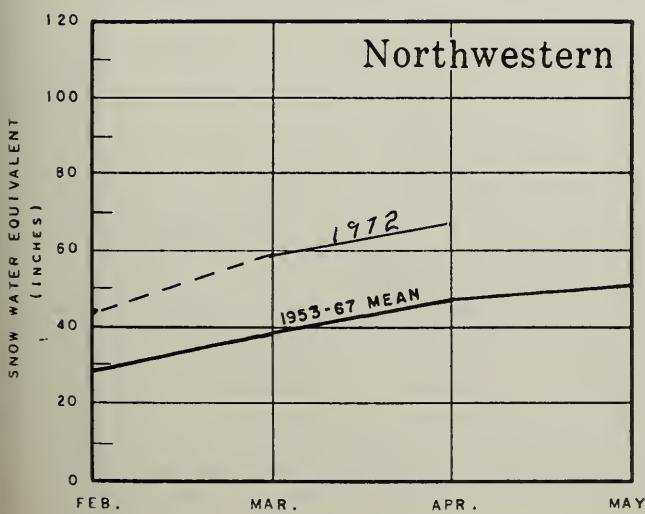
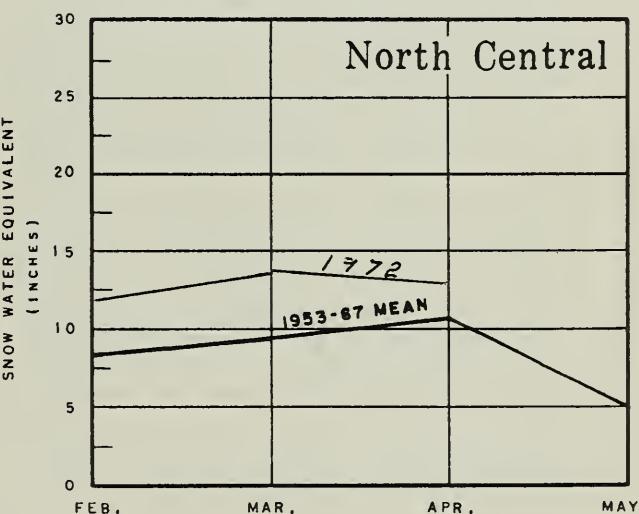
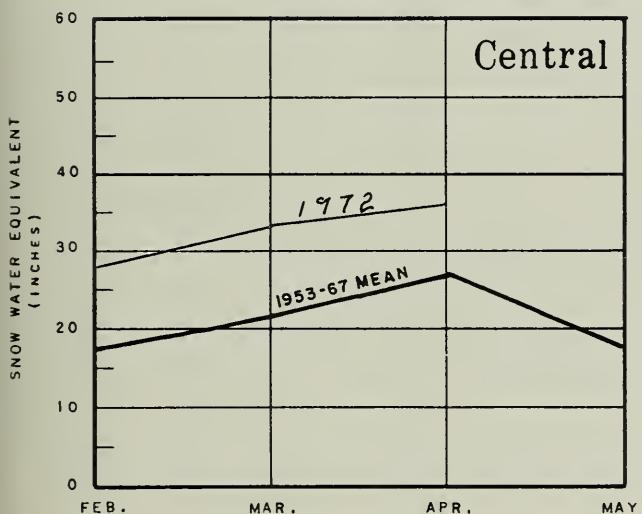
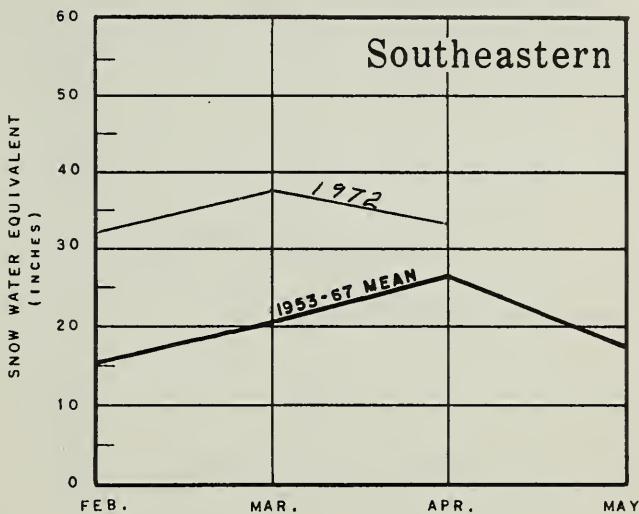
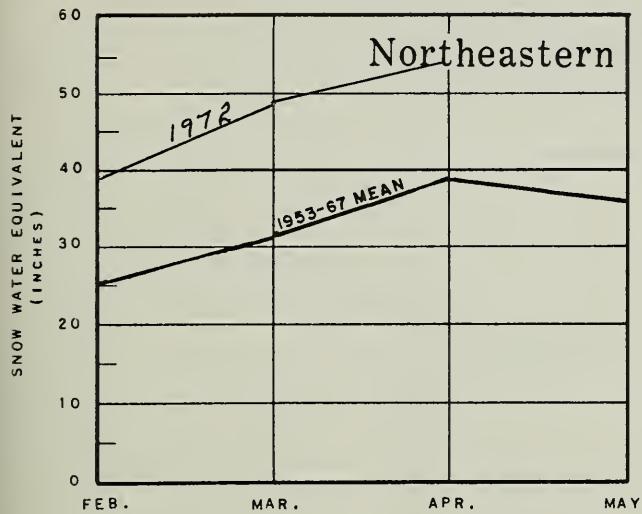
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorological Services of Canada and National Weather Service.

2/ - Departure from 15-year (1953-67) drainage division average.

WASHINGTON SNOW COVER

1972

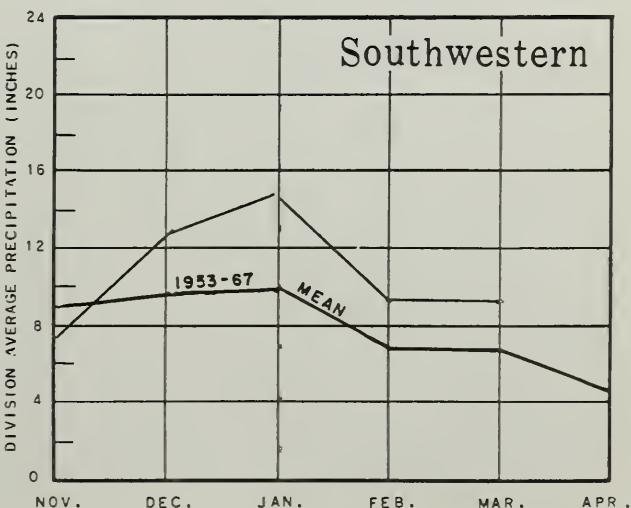
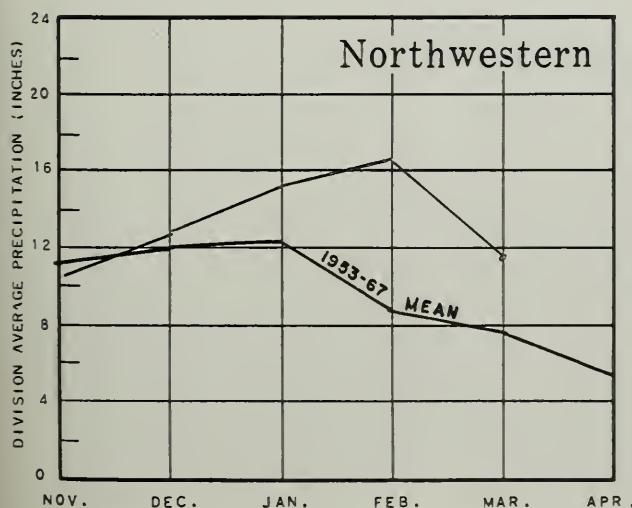
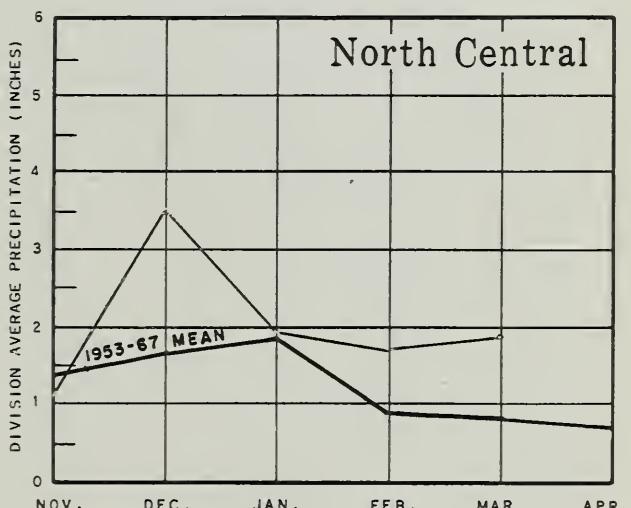
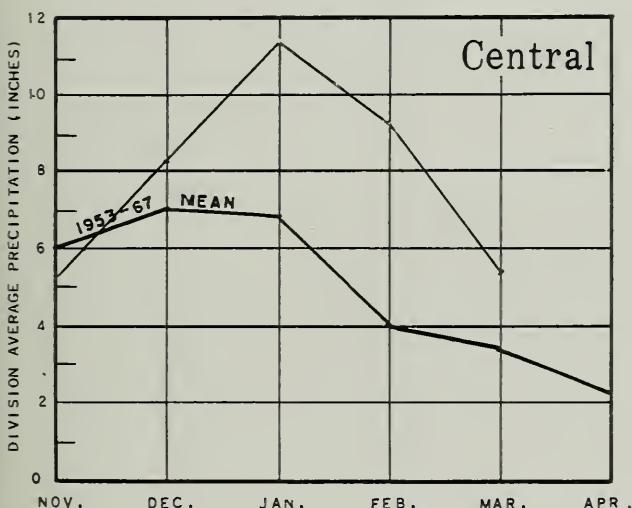
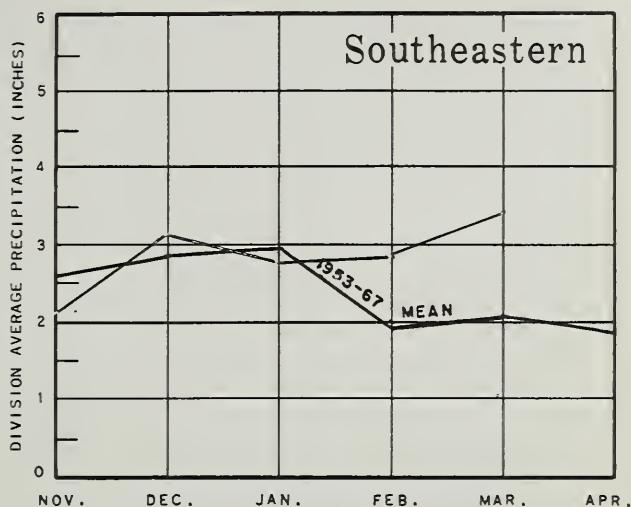
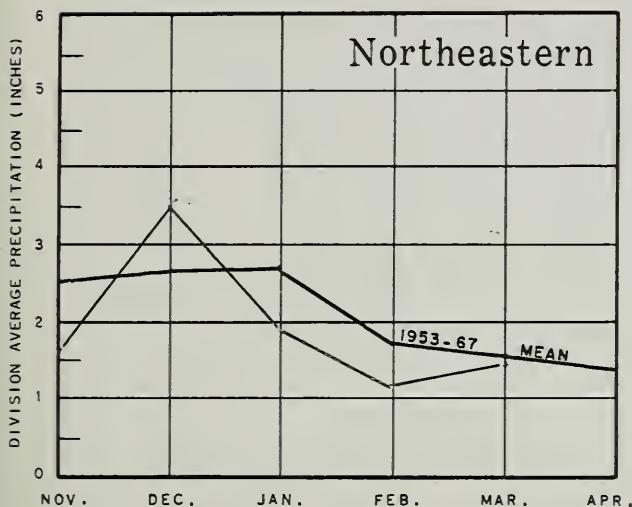
DRAINAGE AREAS



WASHINGTON VALLEY PRECIPITATION

1971 ~ 1972

DRAINAGE AREAS

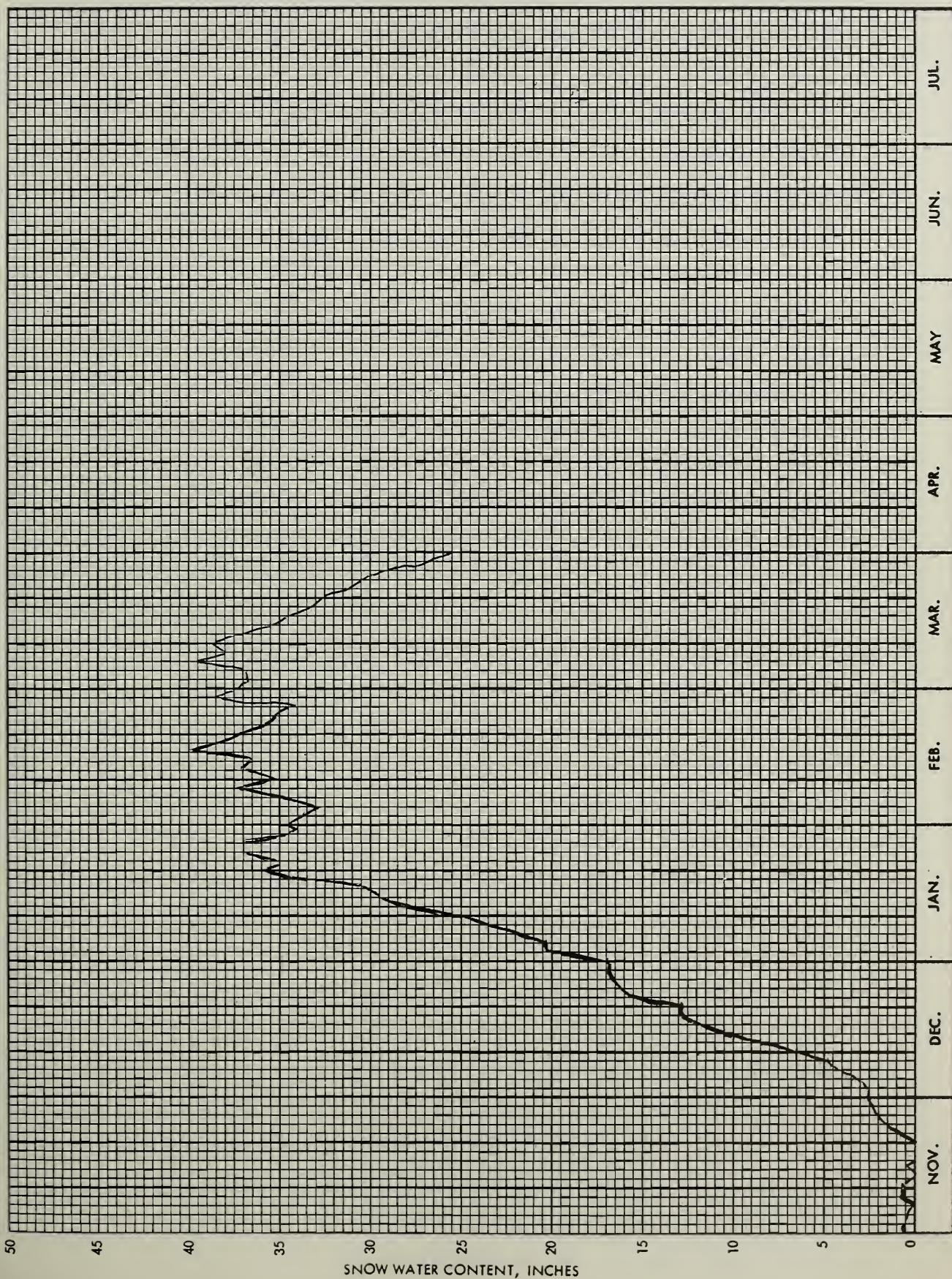


Cougar Mountain - FS
SNOW PILLOW DATA

AS OF April 1, 1972

Sec. 21 T. 21N R. 9E No. 21B42SP Drainage: Green River

Lat. 47° 17' Long. 121° 40' Elev. 3200'



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2

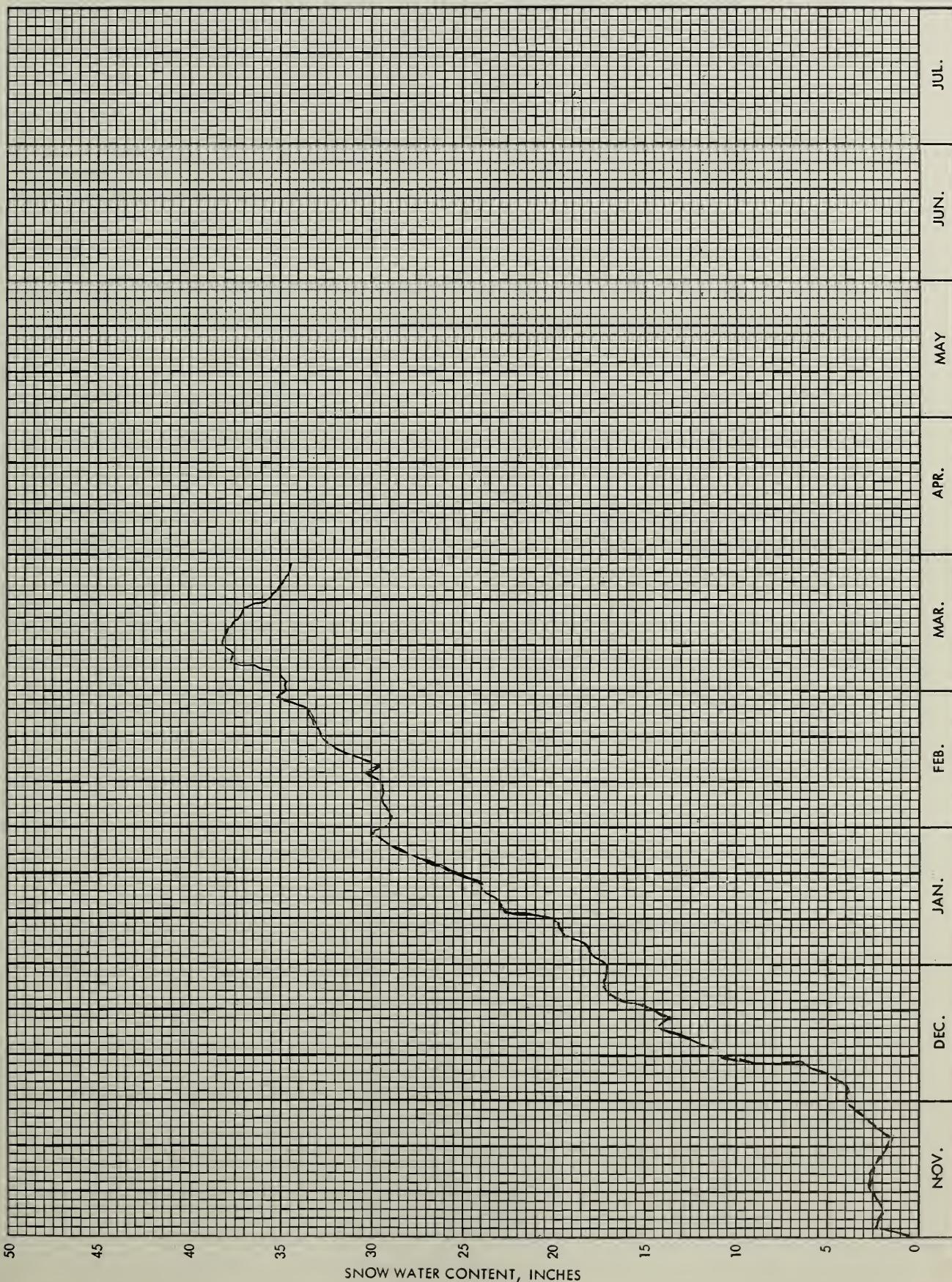
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Berne-Mill Creek
SNOW PILLOW DATA

AS OF April 1, 1972

Sec. 13 T. 26N R. 14E No. 21B41SP Drainage: Wenatchee R.

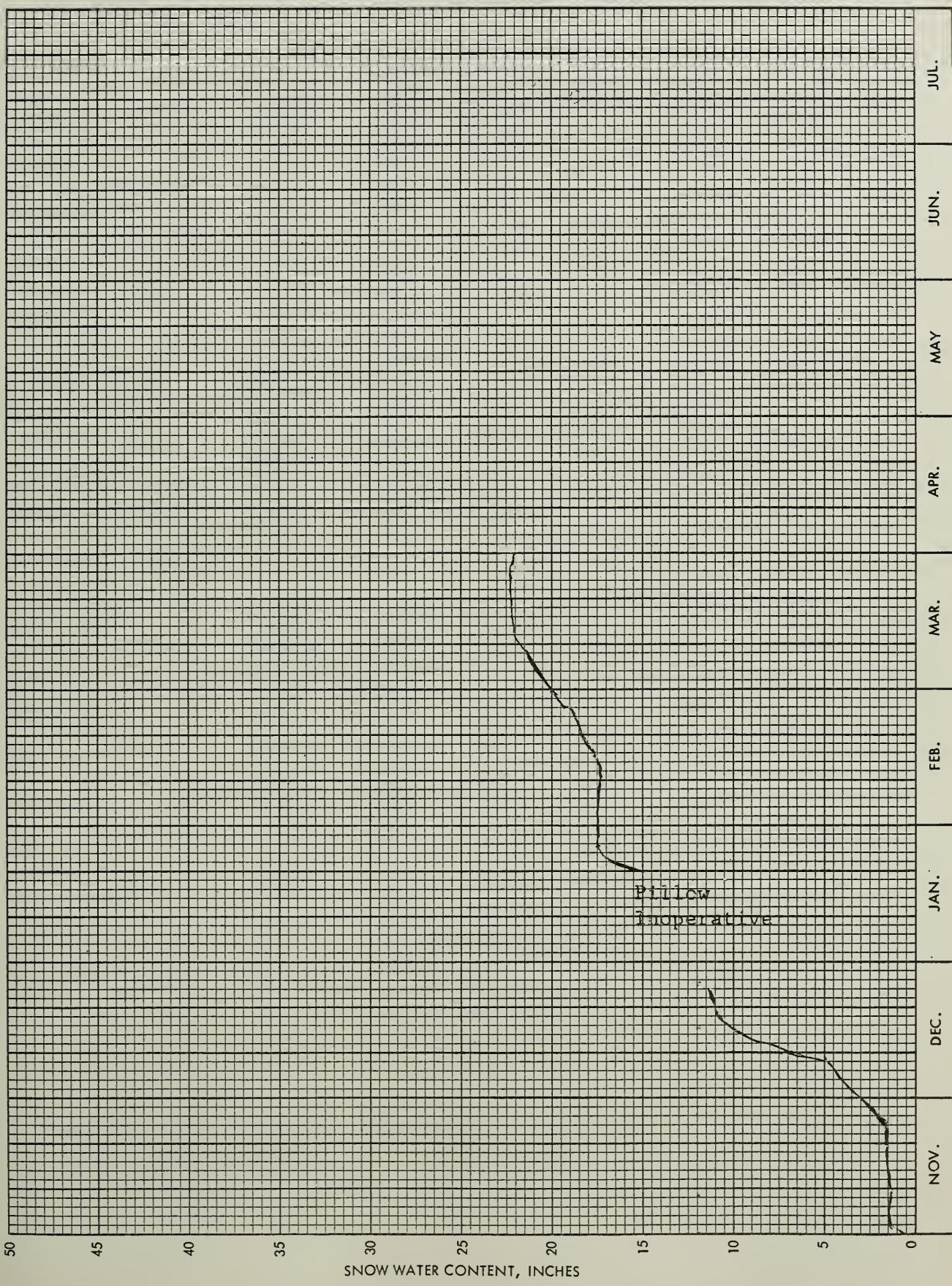
Lat. $47^{\circ} 45'$ Long. $121^{\circ} 42'$ Elev. 3240'



Trough No. 2
SNOW PILLOW DATA

AS OF April 1, 1972

Sec. 10 T. 20N R. 20E No. 20B25SP Drainage: Wenatchee
Lat. $47^{\circ} 14'$ Long. $120^{\circ} 19'$ Elev. 5310'



010523-0

010523-0

APPENDIX 1
SNOW DATA MARCH 1 to APRIL 1, 1972

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	No.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average ✓

U P P E R C O L U M B I A D R A I N A G E

PEND OREILLE RIVER

Baree Creek	15B11	5500	3/30	146	68.9	57.5	49.6
Baree Midway	15B16	4600	3/30	113	52.3	41.8	38.8
Baree Trail	15B15	3800	3/31	20	8.8	16.2	7.8
Benton Meadow	16A2	2344	3/29	0	0.0	6.5	3.2
Benton Spring	16A3	4900	4/3	41	18.2	22.2	20.8
Boyer Mountain	17A2	5250	3/29	62	26.0	36.0	27.9
Brush Creek	14A4	5000	3/28	41	14.5	13.2	13.1
Bunchgrass Meadow	17A1	5000	3/28	75	32.8	32.4	31.8
#Chewelah	17A4	4925	4/1	34	13.1	19.4	19.2*
Heart Lake Trail	14C10	4800	3/28	87	39.4	33.2	23.0
Hoodo Basin	15C10	4800	3/28	176	80.8	67.8	54.5
Hoodo Creek	15C1	6200	3/28	175	78.3	64.2	50.6
Lookout	15B2	5250	3/30	119	54.5	49.8	38.4
Mosquito Ridge	16A4A	5100	3/27	105	45.6	46.6	40.2*
Nelson	Canada	3050	3/27	42	16.7	20.6	15.8**
Schweitzer Bowl	16A6	4500	3/30	69	31.8	38.8	--
Schweitzer Ridge	16A5	6100	3/30	118	51.8	55.5	--
Smith Creek	16A1	4800	4/3	119	56.7	64.6	50.1
Winchester Creek	17A3	2970	3/28	19	7.4	18.4	11.3*

KETTLE RIVER

Barnes Creek	Canada	5500	3/29	71	25.5	23.1	212.**
Big White Mountain	Canada	5500	3/26	69	23.7	20.9	19.4**
Boulder Road	18A2	1450	3/29	0	0.0	7.8	1.8*
Butte Creek	18A3	4070	3/29	23	6.9	11.7	9.9*
Cabin Creek	18A8	3170	3/29	19	6.8	11.3	8.9*
Carmi	Canada	4100	3/26	26	9.0	8.6	6.1**
Farron	Canada	4000	3/27	36	13.2	19.0	13.4**
Goat Creek	18A4	3595	3/29	5	1.7	9.2	6.5*
Lower Trapping Cr.	Canada	3050	3/26	18	6.2	6.4	3.3**
#Monashee Pass	Canada	4500	3/29	49	17.8	15.5	14.1**
Old Glory Mountain	Canada	7000	3/26	95	33.6	30.2	27.9**
Snow Caps Creek	18A5	2150	3/29	0	0.0	6.5	1.9*
Snow Caps Trail	18A6	2720	3/29	7	2.5	9.2	5.7*
Summit G. S.	18A7	4600	Not Measured			9.2	9.6*
Upper Trapping Cr.	Canada	5500	3/26	37	12.6	11.4	9.1**

Not located directly on this drainage

* Adjusted 1953-67 average

** Average for years of record

APPENDIX 2

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	No.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average

COLVILLE RIVER

Baird	17A6	3215	4/1	0	0.0	8.0	6.4*
Carlson	18A9	2885	4/1	0	0.0	6.0	2.7*
Chewelah	17A4	4925	4/1	34	13.1	19.4	19.2*
Stranger Mountain	17A5	4990	4/1	18	6.8	22.3	14.3*
Togo	18A10	3370	4/1	23	10.4	20.8	11.2*

SPOKANE RIVER

Above Burke	15B8	4100	3/27	85	35.6	34.0	25.0
Above Roland	15B7	4350	3/30	114	52.8	45.1	34.8*
Below Roland	15B6	3770	3/30	47	21.1	21.4	17.0*
Copper Ridge	16B2	4800	3/30	78	38.6	31.5	31.1
Forty-nine Meadows	15B3	5000	3/31	98	42.3	46.0	36.1
Fourth of July Summit	16B3	3100	3/16	24	9.4	11.2	--
			3/30	14	5.4	10.8	11.2*
Granite Peak	15B13A	6000	3/31	171	71.6	64.4	51.2*
Kellogg Peak	16B5A	5560	3/30	107	50.2	46.3	33.5*
#Lookout	15B2	5250	3/30	119	54.5	49.8	38.4
Lost Lake	15B14A	6000	3/31	224	98.6	--	66.2*
Lower Sands Creek	16B1	3400	3/30	68	27.9	24.6	21.0
Medicine Ridge	15B4A	6150	3/31	160	67.0	55.1	--
#Mosquito Ridge	16A4A	5110	3/27	105	45.6	46.6	40.2
Outlaw Creek	15B12A	3650	3/31	52	18.5	26.1	17.8*
Roland Summit	15B5A	5200	3/30	142	67.1	53.8	41.2*
Sherwin	16C1	3200	3/30	55	21.7	14.7	16.6*
Sunset	15B9A	5600	3/27	124	53.8	48.2	35.6*

SANPOIL RIVER

Sherman Creek Pass	18A1	5350	3/29	38	12.7	15.6	15.2
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OKANOGAN RIVER

Aberdeen Lake	Canada	4300	3/28	26	6.8	7.0	6.1**
Blackwall Peak	Canada	6250	Late Report			47.5	34.4**
Bouleau Creek	Canada	5000	3/29	44	18.3	15.8	12.0**
Bouleau Lake	Canada	4500	3/26	60	18.3	18.0	--
Brookmere	Canada	3200	3/26	44	15.7	14.8	9.6**
Carrs Landing Lower	Canada	2250	3/30	0	0.0	1.6	0.0**
Carrs Landing Upper	Canada	3200	3/30	12	4.0	5.3	3.2**
Brenda Mine	Canada	4800	3/28	56	20.9	17.0	12.5**

Not located directly on this drainage

* Adjusted 1953-67 average

** Average for years of record

APPENDIX 3

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	No.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average

OKANOGAN RIVER (Cont.)

Clark	19A8a	7000	Late Report		29.9	23.1*	
Enderby	Canada	6250	3/27	136	40.5	38.1	37.3**
Hamilton Hill	Canada	4900	3/29	76	33.5	19.3	14.8**
#Harts Pass	20A5A	6500	3/28	161	67.9	61.1	46.6
#Horseshoe Basin +	19A5a	7000	3/30	70	29.4	24.3	13.5*
Isintok Lake	Canada	5510	3/25	49	16.6	9.5	7.1**
Lost Horse Mountain	Canada	6300	3/27	61	21.0	12.4	8.0**
#Loup Loup	19A7	4650	3/29	31	12.0	13.3	8.7*
Lower Esperon Creek	Canada	4270	3/25	45	15.5	16.3	12.9**
McCulloch	Canada	4200	3/26	26	8.4	8.0	6.6**
Middle Esperon Creek	Canada	4580	3/25	55	19.2	21.8	15.5**
Missezula Mountain	Canada	5100	Late Report			14.0	8.3**
Mission Creek	Canada	6000	3/28	75	26.2	25.1	20.0**
Monashee Pass	Canada	4500	3/29	49	17.8	15.5	14.1**
Mount Kobau	Canada	5950	3/30	50	17.4	16.8	13.5**
Muckamuck +	19A9a	6390	Late Report			21.1	17.5*
Mutton Creek No. 1	19A1	5700	3/29	63	24.9	18.4	14.1
Mutton Creek No. 2	19A4	6000	3/30	62	23.0	20.6	15.1
New Copper Mountain	Canada	4300	3/25	30	11.8	10.6	4.9**
New Penticton Res.	Canada	6200	3/29	44	14.0	9.9	--
Nickel Plate Mtn.	Canada	6200	3/27	48	15.9	12.1	7.7**
Paysayten +	20A28a	4300	3/30	66	27.7	25.8	14.9**
Postill Lake	Canada	4500	3/29	31	11.2	11.6	8.8**
#Quartette Lake	Canada	4000	3/25	58	23.4	18.9	15.1
Rusty Creek	19A3	4000	3/30	20	8.1	8.8	7.0
Salmon Meadows	19A2	4500	3/30	36	12.4	14.2	10.6
Silver Star Mountain	Canada	6050	3/26	102	41.0	34.8	26.8**
Starvation Mountain +	19A10a	6750	Late Report			23.5	22.7*
Summerland Reservoir	Canada	4200	3/26	45	15.3	13.5	9.0
Touts Coulee	19A6	2845	3/30	5	1.9	4.4	0.7*
Trout Creek	Canada	4700	3/26	43	15.6	10.1	7.2**
Upper Esperon Creek	Canada	5290	3/25	65	22.0	26.5	20.3**
White Rocks Mountain	Canada	6000	3/29	81	33.6	34.1	22.2**
Vaseux Creek	Canada	4600	3/26	30	9.4	9.2	--

METHOW RIVER

Billy Goat Pass +	21A10a	6409	Marker buried		53.2	34.4*	
Dollar Watch +	20A29a	7000	3/30	114	47.9	36.5	27.6*
Harts Pass	20A5A	6500	3/28	161	67.9	61.1	46.6
Horseshoe Basin +	19A5a	7000	3/30	70	29.4	24.3	13.5*
Loup Loup	19A7	4650	3/29	31	12.0	13.3	8.7*

Not located directly on this drainage

* Adjusted 1953-67 average

** Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

APPENDIX 4

SNOW

SNOW	THIS YEAR			PAST RECORD	
	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	Last Year
DRAINAGE BASIN and/or SNOW COURSE	NAME	No.	Elevation		Average

METHOW RIVER (Cont.)

#Mutton Creek No. 1	19A1	5700	3/29	63	24.9	18.4	14.1
#Mutton Creek No. 2	19A4	6000	3/30	62	23.0	20.6	15.1
#Rusty Creek	19A3	4000	3/30	20	8.1	8.8	7.0
#Salmon Meadows	19A2	4500	3/30	36	12.4	14.2	10.6
#War Creek Pass +	20A31a	6500	Marker buried		57.3	--	

CHELAN LAKE BASIN

Lyman Lake	20A23A	5900	3/22	223	106.3	82.4	58.5
Park Creek Ridge	20A12A	4600	3/28	153	65.4	66.8	46.5
Rainy Pass	20A9	4780	3/28	148	65.6	57.6	41.2
Safety Harbor	20A30A	6300	3/27	116	49.5	42.7	29.4*
War Creek Pass +	20A31a	6500	Marker buried		57.3	43.1*	

ENTIAT RIVER

Brief	20B19	1600	3/28	16	7.1	11.7	2.5*
Entiat Meadows +	20A33a	4800	4/1	147	67.6	64.9	50.6
Entiat River Trail +	20A34a	3150	4/1	53	27.8	38.0	22.7*
Four Mile Ridge +	20B27a		4/1	120	55.2	New Marker	
Fox Camp +	20A36a	6510	Marker buried		83.7	67.9	61.0*
Pope Ridge	20B20	4300	4/1	55	26.0	27.8	20.2*
Pugh Ridge +	20A32a	6400	4/1	131	60.3	48.5	40.6*
Shady Pass	20A37	5000	4/1	116	52.8	38.5	--
Snow Brushy +	20A35a	3850	4/1	111	51.0	58.6	43.9*
Tommy Creek +	20B21a	5300	4/1	84	38.6	34.3	28.2*

WENATCHEE RIVER

Berne-Mill Creek	21B23	2925	3/28	97	46.0	45.6	27.5*
Berne-Mill Creek New	21B41SP	3240	3/28	69	30.8	40.9	--
Blewett Pass No. 2	20B2	4270	3/29	69	34.3	24.8	16.1
Chiwaukum G. S.	20B16	1810	3/29	48	20.6	19.4	9.6*
#Fish Lake	21B4	3371	3/28	120	59.4	56.8	35.4
Lake Wenatchee	20B5	1970	3/28	61	24.1	24.0	11.1*
Leavenworth R. S.	20B17	1127	3/15	Not Measured.		6.2	--
			3/31	4	2.0	3.2	--
#Lyman Lake	20A23A	5900	3/22	223	106.3	82.4	58.5
Merritt	20B18	2140	3/28	67	27.6	24.6	14.2*

Not located directly on this drainage

* Adjusted 1953-67 average

+ Snow water equivalent estimated from aerial stadia observation

APPENDIX 5

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	No.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average
								✓

WENATCHEE RIVER (Cont.)

Stevens Pass	21B1	4070	3/15	175	85.1	67.9	49.7
			3/28	170	87.0	79.1	54.1
Stevens Pass S. Shed	21B45	3700	3/15	120	56.1	50.7	--
			3/28	117	56.0	57.2	--

SQUILCHUCK CREEK

Beehive Springs	20B3	4400	3/31	19	9.9	9.8	7.7*
Scout-A-Vista	20B4	3400	3/31	22	10.5	11.3	6.4*

STEMILT CREEK

Jump-Off	20B8	4450	3/29	25	12.6	11.2	7.3*
Stemilt Slide	20B6	5000	3/30	45	22.6	19.1	13.3*
Upper Wheeler	20B7	4400	3/30	24	13.1	13.6	8.3*

COLOCKUM CREEK

Colockum Creek Upper	20B22	5300	3/29	42	21.5	18.5	--
Colockum Creek Lower	20B23	4300	3/29	26	13.0	13.0	--

YAKIMA RIVER

#Ahtanum R. S.	21C11	3100	3/27	10	4.3	10.3	4.9*
Big Boulder Creek	21B9	3200	3/28	68	32.4	34.7	18.7
#Blewett Pass No. 2	20B2	4270	3/29	69	34.3	24.8	16.1
Bumping Lake	21C8	3450	3/15	56	22.6	29.0	16.9*
			3/31	49	20.5	29.5	16.8
Bumping Lake New	21C36	3400	3/15	70	28.9	31.5	19.9*
			3/31	63	26.6	34.0	17.2*
#Cayuse Pass	21C6	5300	3/27	272	128.2	135.3	91.2
Colockum Pass	20B9	5370	3/31	55	26.0	21.8	18.6*
Cooke Creek	20B10	4123	3/31	27	11.9	9.7	5.5*
#Corral Pass	21C13	6000	3/27	161	69.0	59.8	41.7*
Fish Lake	21B4	3371	3/28	120	59.4	56.8	35.4
Green Lake	21C10	6000	3/27	124	54.5	--	33.2*
Grouse Camp	20B11	5385	3/30	62	30.3	20.4	18.2*
High Creek	20B12	2930	3/30	25	11.2	10.8	0.9*
Lake Cle Elum	21B14M	2200	3/14	56	24.4	7.8	11.0*
			3/31	39	16.5	8.8	5.7
Lemah Creek +	21B47a	3327	3/28	123	59.0	--	--
Manashtash	20C1	3935	3/29	0	0.0	6.5	1.8*

Not located directly on this drainage

* Adjusted 1953-67 average

APPENDIX 6

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	No.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average ✓

YAKIMA RIVER (Cont.)

Morse Lake	21C17	5400	3/29	184	69.4	94.4	62.0*
Nanum	21B39	2340	3/30	32	14.6	14.5	8.0*
#Olallie Meadows	21B2	3625	3/29	158	81.7	81.0	51.3
#Status Pass	20D1	4030	3/30	17	8.3	19.9	--
#Stampede Pass	21B10	3000	3/16	153	46.2	65.1	45.2
			3/30	149	46.7	67.5	48.8
Trail Creek	20B14	3360	3/31	0	0.0	0.0	--
Tunnel Avenue	21B8	2450	3/14	88	38.6	35.2	25.2*
			3/31	80	36.0	38.2	25.9
Van Epps Pass +	20B26a	5925	3/28	220	105.6	--	--
Walters Flat	20B15	3360	3/30	23	11.0	11.1	4.9*
Waptus Lake +	21B49a	3024	3/28	135	64.8	--	--
White Pass (E. Side)	21C28	4500	3/16	104	51.6	37.7	24.4*
			3/30	102	48.3	41.7	26.6*
White Pass (L. Lake)	21C27	4500	Not Measured			43.6	31.4*
			3/27	117	52.4	42.4	32.6*

AHTANUM CREEK

Ahtanum R. S.	21C11	3100	3/27	10	4.3	10.3	4.9*
#Green Lake	21C10	6000	3/27	124	54.5	--	33.2*

LOWER COLUMBIA DRAINAGEASOTIN CREEK

Spruce Springs	17C4	5700	3/29	79	35.8	22.7	--
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MILL CREEK

Homestead	17C1	4030	3/28	17	7.8	9.9	7.9*
Martin Springs	17C2	4400	3/28	43	19.5	16.6	14.5*
Tollgate	18D3M	5070	3/30	74	33.6	30.7	25.9

KLICKITAT RIVER

Status Pass	20D1	4030	3/30	17	8.3	19.9	12.1*
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+ Snow water equivalent estimated from aerial stadia observation

Not located directly on this drainage

* Adjusted 1953-67 average

APPENDIX 7

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	No.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average ✓

WHITE SALMON RIVER

Cultus Creek	21C12	4000	3/28	137	66.3	79.3	49.7
#Surprise Lakes	21C13A	4250	3/28	160	80.7	84.2	54.8

WIND RIVER

Old Man Pass	21D19	3100	3/28	58	25.2	44.4	20.7*
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LEWIS RIVER

Blue Lake +	21C22a	4800	3/28	260	130.0	130.0	84.2*
Bob's Trail	21C21	2200	3/29	50	22.1	33.0	13.8*
Calamity Ridge +	22D1a	2500	3/28	12	5.4	20.6	--
Council Pass +	21C18a	4200	3/28	131	64.2	71.3	42.6*
#Cultus Creek	21C12	4000	3/28	137	66.3	79.3	49.7
Divide Meadow +	21C29a	5600	3/28	204	102.0	89.8	60.0*
Grand Meadow	21C25	3500	3/28	83	38.2	46.0	29.0*
Lone Pine Shelter	21C26	3800	3/28	122	56.3	77.7	43.2*
Marble Mountain +	22C5a	3200	3/28	87	45.2	73.6	40.2*
#Mosquito Meadows	21C19	4100	3/28	128	58.6	80.3	47.4*
New Muddy River	22C6	1400	3/29	12	5.7	20.7	10.8*
Old Man Pass	21D19	3100	3/28	58	25.2	44.4	20.7*
Plains of Abraham +	22C1a	4400	3/28	180	90.0	108.9	70.2*
Smith Creek Road	22C4	2100	3/29	45	21.9	41.9	17.2*
Spencer Meadow +	21C20a	3400	3/29	62	29.8	51.0	25.6*
Surprise Lakes	21C13A	4250	3/28	160	80.7	84.2	54.8
Table Mountain +	21C24a	4200	3/28	136	66.6	81.0	49.2*
Timbered Peak +	21D18a	3000	3/28	24	10.8	36.6	23.7*

COWLITZ RIVER

Cayuse Pass	21C6	5300	3/27	272	128.2	135.3	91.2
Mosquito Meadows	21C19	4100	3/28	128	58.6	80.3	47.4
Ohanapecosh	21C32	2200	3/27	62	27.9	36.0	16.4
Packwood Lake	21C31	2870	3/27	64	27.9	29.1	13.5*
Pigtail Peak	21C33	5900	3/16	222	110.3	93.0	63.3*
			3/27	229	104.3	88.0	72.9*
#Plains of Abraham +	22C1a	4400	3/28	180	90.0	108.9	70.2
Potato Hill	21C14	4500	3/28	110	50.1	55.1	33.0*
#White Pass (E. Side)	21C28	4500	3/16	104	51.6	37.7	24.4*
			3/30	102	48.3	41.7	26.6*
#White Pass (L. Lake)	21C27	4500	3/27	117	52.4	42.5	32.6*
Willame Creek	21C30	3250	3/27	103	45.0	54.6	35.0*

+ Snow water equivalent estimated from aerial stadia observation

Not located directly on this drainage

* Adjusted 1953-67 average

APPENDIX 8

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	No.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average

P U G E T S O U N D D R A I N A G ENISQUALLY RIVER

Ghost Forest	21C4	4550	3/28	176	84.5	73.0	50.1
Longmire	21C3	2760	3/28	51	21.8	29.7	10.6
New Paradise Park	21C35	5500	3/28	255	124.6	106.6	73.9*
Stem Glade	21C1	5050	3/28	249	116.1	104.7	74.4

WHITE RIVER

#Cayuse Pass	21C6	5300	3/27	272	128.2	135.3	91.2
Corral Pass	21C13	6000	3/27	161	69.0	59.8	41.7*
#Morse Lake	21C17	5400	3/29	184	69.4	94.4	62.0*
White River Campgr.	21C34	4000	3/22	68	32.6	--	--

GREEN RIVER

Airstrip	21B24	1800	3/27	6	2.5	3.6	--
Charley Creek	21B25	1200	3/27	0	0.0	0.0	--
Cougar Mountain SP	21B42SP	3200	3/30	50	25.6	37.0	--
Grass Mtn. No. 2	21B27	2900	3/27	77	35.4	45.2	26.1*
Grass Mtn. No. 3	21B28	2100	3/27	20	8.1	13.5	--
Lester Creek	21B29	3100	3/27	93	41.1	40.0	28.7*
Lynn Lake	21B50	4000	3/27	79	41.2	44.7	--
Sawmill Ridge	21B29	4700	3/27	140	66.6	60.8	46.0*
Snowshoe Butte SP	21B43SP	5000	3/29	200	96.2	77.0	--
Stampede Pass	21B10	3000	3/16	153	46.2	65.1	45.2
			3/30	149	46.7	67.5	48.8
Twin Camp	21B30	4100	3/27	78	37.2	37.2	31.0*

CEDAR RIVER

City Cabin	21B3	2390	3/28	58	26.2	36.9	18.3*
Mt. Gardner	21B21	3300	3/29	42	22.0	40.9	19.8*
Mt. Lindsay	21B16	2500	3/28	52	24.1	36.6	17.7*
Mt. Washington New	21B50	3000	Not Measured				
Rex River	21B17	2400	3/29	60	28.5	15.7	19.8*
S. F. Cedar	21B6	3000	3/28	79	35.5	41.0	24.8
Tinkham Creek	21B20	3400	3/28	82	36.9	46.7	23.2*

Not located directly on this drainage

* Adjusted 1953-67 average

APPENDIX 9

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year
NAME	No.	Elevation					Average ✓

SNOQUALMIE RIVER

Alpine Meadow	21B48	3500	3/27	156	62.4	78.1	--
#Lake Elizabeth	21B19	2900	3/27	147	71.2	82.5	46.9*
Olallie Meadows	21B2	3625	3/29	158	81.7	81.0	51.3
S. F. Tolt	21B18	1900	3/27	0	0.0	3.7	--

SKYKOMISH RIVER

Lake Elizabeth	21B19	2900	3/27	147	71.2	82.5	46.9*
#Stevens Pass	21B1	4070	3/15	175	85.1	67.9	49.7
			3/28	170	87.0	79.1	54.1
#Stevens Pass S. Shed	21B45	3700	3/15	120	56.1	50.7	--
			3/28	117	56.0	57.2	--

SKAGIT RIVER

Beaver Creek Trail	21A4	2200	3/28	45	19.9	31.1	13.6
Beaver Pass	21A1	3680	3/28	111	49.7	50.6	35.6
Brown Top	21A28a	6000	3/28	213	97.2	84.6	--
Devils Park	20A4	5900	3/27	163	69.9	57.2	46.0
Freezeout Cr. Trail	20A1	3500	3/28	53	21.3	23.8	13.4
Granite Creek	21A29	3500	3/27	78	31.4	29.4	--
#Harts Pass	20A5A	6500	3/28	161	67.9	61.1	46.6
Klesilkwa	Canada	3700	3/29	69	31.1	25.4	15.0**
Lake Hozomeen	21A2	2600	3/28	35	13.4	20.4	10.4
#Lyman Lake +	20A23A	5900	3/22	223	106.3	82.4	58.5
Meadow Cabins	20A8	1900	3/27	37	14.4	11.4	7.5
New Lake Hozomeen	21A30	2600	3/28	43	17.5	25.8	--
New Tashme	Canada	2500	3/29	55	23.1	19.4	10.7**
Quartette Lake	Canada	4000	3/25	58	23.4	18.9	15.1**
#Rainy Pass	20A9	4780	3/27	148	65.6	57.6	41.2
Thunder Basin	20A7	4200	3/27	87	35.8	32.0	25.8

BAKER RIVER

Dock Butte	21A11A	3800	3/30	212	100.0	100.8	81.0*
Easy Pass	21A7A	5200	3/29	249	119.4	117.7	96.7*
Jasper Pass	21A6A	5400	3/29	251	112.3	126.0	103.6*
Komo Kulshan	21A17	800	3/29	38	15.8	16.8	--
Marten Lake	21A9A	3600	3/29	218	110.8	108.8	88.2*
Mount Blum +	21A18a	5800	3/29	180	--	--	--

Not located directly on this drainage

* Adjusted 1953-67 average

** Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

APPENDIX 10

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average

BAKER RIVER (Cont.)

#Panorama New	21A26	4300	3/15	197	98.3	87.2	--
			3/31	187	99.5	96.6	--
Rocky Creek	21A12A	2100	3/30	95	39.4	57.9	30.5*
Schreibers Meadow	21A10A	3400	3/29	168	84.5	94.2	73.3*
S. F. Thunder Creek	21A14A	2200	3/30	20	9.1	17.6	5.3*
Sulphur Creek	21A13	1600	3/30	55	22.7	32.6	13.7*
Three Mile Creek	21A8A	4500	3/30	6	2.4	6.3	--
Watson Lakes	21A8A	4500	3/29	214	103.5	103.2	78.2*

NOOKSACK RIVER

Bald Mountain +	21A19a	4400	3/30	181	92.3	70.8	--
Canyon +	21A20a	5100	Marker buried			86.0	--
Glacier Creek	21A23	3700	3/30	77	36.9	40.5	--
Panorama New	21A26	4300	3/15	197	98.3	87.2	--
			3/31	187	99.5	96.6	--
Twin Lakes +	21A21a	5200	Marker buried			94.0	--

O L Y M P I C P E N I N S U L ADUNGENESS RIVER

Deer Park	23B4	5200	3/27	67	28.1	34.9	26.4*
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MORSE CREEK

Cox Valley	23B14	4500	3/31	107	45.3	67.2	--
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ELWHA RIVER

Hurricane	23B3	4500	3/31	70	29.9	39.8	29.3
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SKOKOMISH RIVER

Black & White	23B7	4200	3/28	116	52.2	73.0	47.9
Black & White Lakes	23B6	4700	3/28	166	84.4	98.8	67.3
Four Streams	23B10	3000	3/28	69	31.4	67.8	--
Home Sweet Home	23B5	5200	3/28	226	104.7	119.3	81.9
Sundown Pass	23B8	3900	Not Measured			104.0	66.5*

Not located directly on this drainage

* Adjusted 1953-67 average

+ Snow water equivalent estimated from aerial stadia observation

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests and Water Resources,
Water Resources Service, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers
U. S. Department of Agriculture
Forest Service
U. S. Department of Commerce
NOAA, National Weather Service
U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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